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# federal register

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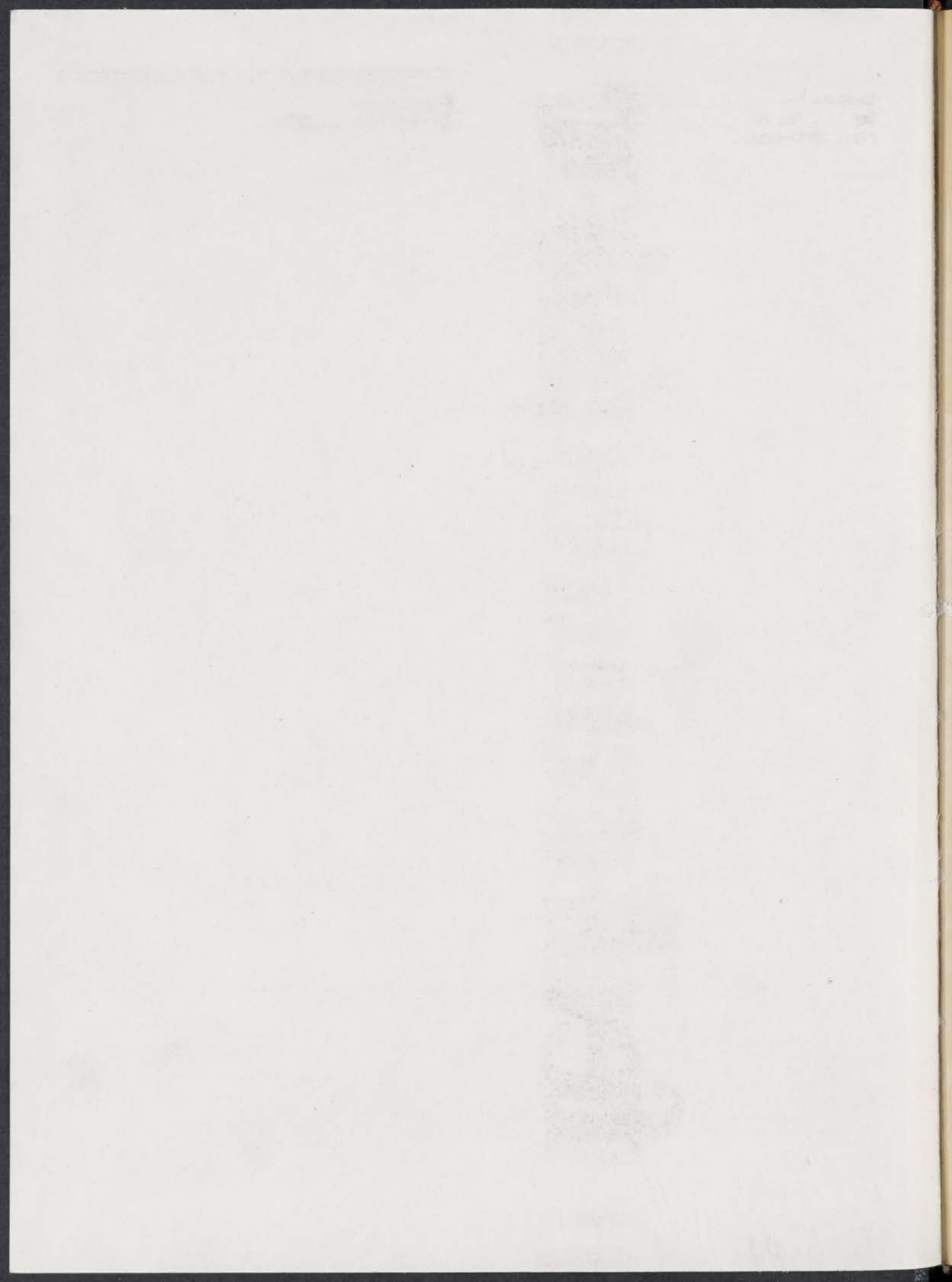
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# Federal Register



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# Rules and Regulations

Federal Register

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This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect, most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510. The Code of Federal Regulations is sold by the Superintendent of Documents. Prices of new books are listed in the first FEDERAL REGISTER issue of each week.

## OFFICE OF PERSONNEL MANAGEMENT

### 5 CFR Part 532

#### Prevailing Rate Systems

**AGENCY:** Office of Personnel Management.

**ACTION:** Final rule.

**SUMMARY:** The Office of Personnel Management (OPM) is issuing final regulations which delegate to the Department of Defense (DOD) the responsibility for establishing and issuing the appropriated and nonappropriated fund wage schedules for United States citizen wage employees in foreign areas. The regulations will simplify the process and result in the issuance of wage schedules on a more timely basis.

**EFFECTIVE DATE:** January 19, 1990.

**FOR FURTHER INFORMATION CONTACT:** Allan Summers, (202) 632-7830.

**SUPPLEMENTARY INFORMATION:** On September 11, 1989, OPM published proposed regulations (54 FR 37470) to delegate to DOD the responsibility for computing and issuing the overseas schedules. The proposed regulations provided a 60-day period for public comment. OPM received written comments from one labor organization. The labor organization was in favor of the change.

#### E.O. 12291, Federal Regulation

I have determined that this is not a major rule as defined under section 1(b) of E.O. 12291, Federal Regulations.

#### Regulatory Flexibility Act

I certify that these regulations will not have a significant economic impact on a substantial number of small entities because they are changes which will affect only employees of the Federal Government.

### List of Subjects in 5 CFR Part 532

Administrative practice and procedure, Government employees, Wages.

U.S. Office of Personnel Management.  
Constance Berry Newman,  
Director.

Accordingly, OPM is amending 5 CFR part 532 as follows:

#### PART 532—[AMENDED]

1. The authority citation for part 532 continues to read as follows:

Authority: 5 U.S.C. 5343, 5346; sec. 532.707 also issued under 5 U.S.C. 552, Freedom of Information Act, Pub. L. 92-502.

2. In § 532.233, paragraph (a) is revised to read as follows:

**§ 532.233 Regular appropriated fund wage schedules in foreign areas and certain U.S. possessions.**

(a) The Department of Defense shall establish and issue regular appropriated fund wage schedules for U.S. citizens who are employees in foreign areas and for employees in Guam, Midway, and the U.S. Virgin Islands. The Department of Transportation shall establish and issue wage schedules for employees in American Samoa. These wage schedules will provide rates of pay for nonsupervisory, leader, supervisory, and production facilitating employees.

\* \* \* \* \*

**§ 532.235 [Amended]**

3. In § 532.235, paragraph (a) is amended by replacing the term "Office of Personnel Management" with the term "Department of Defense" and by adding the words "establish and" after the word "shall".

[FR Doc. 89-29562 Filed 12-19-89; 8:45 am]  
BILLING CODE 6325-01-M

## DEPARTMENT OF AGRICULTURE

### Commodity Credit Corporation

7 CFR Parts 1405, 1421, 1430, 1435, and 1446

Grains and Similarly Handled Commodities, Dairy Products, Peanuts

**AGENCY:** Commodity Credit Corporation, USDA.

**ACTION:** Final Rule.

**SUMMARY:** This final rule adopts without change an interim rule published at 54 FR 30714 which amended 7 CFR part 1421 to set forth the manner in which the Commodity Credit Corporation (CCC) will make storage payments with respect to 1985-Crop Farmer-Owned Reserve (FOR) corn and grain sorghum loans which are extended by producers. This interim rule also amended 7 CFR part 1421 to provide that sample grade grain may not be pledged as collateral for CCC price support loans.

This final rule also removes obsolete provisions at 7 CFR parts 1430, 1435, and 1446. In addition, this final rule adopts without change a proposed rule published at 54 FR 34773 which will amend 7 CFR part 1405 to set forth CCC's policy with respect to the mediation of CCC loans.

**EFFECTIVE DATE:** December 20, 1989.

**ADDRESS:** The Final Regulatory Impact Analysis describing the options considered in developing this final rule is available from Thomas VonGarlem, Assistant Deputy Administrator, State and County Operations, USDA-ASCS, Room 3096, South Building, P.O. Box 2415, Washington, DC 20013.

**FOR FURTHER INFORMATION CONTACT:** Thomas VonGarlem, (202) 447-6761.

**SUPPLEMENTARY INFORMATION:** This rule has been reviewed under USDA procedures established in accordance with Executive Order 12291 and Department Regulation No. 1512-1 and has been designated as "non-major".

It has been determined by an environmental evaluation that this action will have no significant impact on the quality of the human environment; therefore, neither an environmental assessment nor an environmental impact statement is needed.

The title and number of the Federal Assistance Program to which this interim rule applies are: Title-Commodity Loans and Purchases, Number 10.051, as found in the Catalog of Federal Domestic Assistance.

It has been determined that this action will not increase the federal paperwork burden for individual, small businessmen and other persons.

CCC is also not required by 5 U.S.C. 553 or any other provision of law to publish a notice of proposed rulemaking with respect to the subject matter of this final rule. Therefore, the Regulatory Flexibility Act is not applicable.



Keith Bjerke, Executive Vice President, CCC hereby certifies that this rule will not have a significant economic impact on a substantial number of small entities because the action taken in this rule will reduce uncertainty in the operation of the program and will have the effect of stabilizing commodity supply and demand situations.

This activity is not subject to the provisions of Executive Order 12372 which requires intergovernmental consultation with State and local officials. See the Notice related to 7 CFR part 3015, subpart V published at 48 FR 29115 (June 23, 1983).

On July 24, 1989 (54 FR 30714), CCC published an interim rule which amended 7 CFR part 1421 to provide producers with 1985-1988 corn and sorghum Farmer-Owned Reserve Loans which mature on or after August 31, 1989, the opportunity to extend these loans for six months. The interim rule also, provided that any storage payments which the producer earned would be made at the time of the settlement of the loan. No comments were received in response to the interim rule. Accordingly, the provisions of this interim rule are adopted without change.

Beginning in 1988, CCC has published several rules which amended 7 CFR part 1421 to delete obsolete provisions of the regulations governing several price support programs. However, the modification of these provisions in the 1989 edition of the Code of Federal Regulations erroneously reflects several of these amendments. Accordingly, this final rule again amends 7 CFR part 1421 to delete obsolete program provisions which CCC previously stated would be removed.

On March 1, 1988 (53 FR 6131, 6132), CCC amended the Loan and Purchase Programs for 1986 and Subsequent Crops of oats by deleting references to "1986" and inserting in lieu thereof "1987". Similar amendments were made with respect to the Rice and Farm-Stored Peanut Programs. Subsequently, on June 3, 1988, CCC consolidated the regulations set forth at 7 CFR part 1421 at one subpart and deleted several obsolete subparts. See 53 FR 20280, 20290. The 1989 edition of the Code of Federal Regulations correctly reflects the removal of most of these obsolete subparts except for the subparts which were applicable to the 1986 and subsequent crops of oats, rice, and farm-stored peanuts which were deleted by the June 3, 1988, interim rule. Accordingly, this final rule deletes the following subparts which were erroneously referred to, and included in CFR text of the 1989 edition of the Code of Federal Regulations:

Subpart—Loan and Purchased Program for 1986 and Subsequent Crops of Oats (7 CFR 1421.245 through 1421.254); Subpart—1986 Crop Peanut Farm-Stored Loan and Purchase Program (7 CFR 1421.280 through 1421.291); and Subpart—Loan and Purchase Program for 1985 and Subsequent Crop Rice (7 CFR 1421.300 and 1421.301).

In addition, this final rule deletes in its entirety the regulations in "Subpart—Regulations Governing the Special Producer Storage Loan Program" (7 CFR 1421.900 through 1421.917) since all loans subject to this subpart matured no later than March 31, 1989. Additional changes have also been made in 7 CFR part 1421 to correct erroneous references and for clarity.

On August 22, 1989 (54 FR 34773), CCC issued a proposed rule which would amend 7 CFR part 1405 to set forth CCC's policy with respect to the mediation of CCC loans. No comments were received in response to the proposed rule. Accordingly, the proposed rule is adopted without change.

This final rule also deletes obsolete subparts in 7 CFR parts 1430, 1435, and 1446 with respect to CCC dairy, sugar, and peanut price support programs.

Accordingly, the regulations set forth in the interim rule published at 54 FR 30714 are adopted as a final rule without any changes. The proposed rule published at 54 FR 34773 is also adopted without change. In addition, 7 CFR parts 1421, 1430, 1435 and 1446 are amended to remove obsolete provisions.

#### List of Subjects

##### 7 CFR Part 1405

Loan program/agriculture, Price support programs.

##### 7 CFR Part 1421

Grains, Loan programs/agriculture, Price support programs, Warehouses.

##### 7 CFR Part 1430

Milk, Agriculture, Price support programs, Dairy products.

##### 7 CFR Part 1435

Loan Program/agriculture, Price support programs, Sugar.

##### 7 CFR Part 1446

Loan Programs/agriculture, Peanuts, Price support programs, Warehouse.

#### Final Rule

Accordingly, title 7, chapter XIV of the Code of Federal Regulations is amended as follows:

#### PART 1421—[AMENDED]

1. The interim rule published at 54 FR 30714 is adopted as a final rule without change.

2. The authority citation for part 1421 continues to read as follows:

Authority: 7 U.S.C. 1421, 1423, and 1444-1; 15 U.S.C. 714b and 714c; and sec. 501 of Pub. L. 99-198.

3. 7 CFR part 1421 is amended by removing the following subparts:

##### §§ 1421.245-1421.254 [Removed]

A. Subpart—Loan and Purchase Program for 1986 and Subsequent Crops of Oats (§§ 1421.245 through 1421.254).

##### §§ 1421.280-1421.291 [Removed]

B. Subpart—1986 Crops Peanut Farm-Stored Loan and Purchase Program

(§§ 1421.280 through 1421.291).

##### §§ 1421.300-1421.301 [Removed]

C. Subpart—Loan and Purchase Program for 1985 and Subsequent Crop Rice (§§ 1421.300 through 1421.301).

##### §§ 1421.900-1421.917 [Removed]

D. Subpart—Regulations Governing the Special Producer Storage Loan Program (§§ 1421.900 through 1421.917).

##### § 1421.9 [Amended]

4. In § 1421.9(b), the reference to "§ 1421.18(c)" is revised to read "§ 1421.20(c)".

##### § 1421.19 [Amended]

5. The heading of 1421.19 is revised to read "Liquidation of Loans."

##### § 1421.20 [Amended]

6. In § 1421.20(c)(1)(ii), the reference to "§ 1421.5(b)" is revised to read "§ 1421.4(i)".

#### PART 1430—[AMENDED]

7. The authority citation for part 1430 is revised to read as follows:

Authority: 7 U.S.C. 1446; 15 U.S.C. 714b and 714c.

8. 7 CFR part 1430 is amended by removing the following subparts:

##### §§ 1430.291-1430.312 [Removed]

A. Subpart—Regulations Governing Certain Deduction on Milk Marketing of Producers prior to December 1, 1983 (§§ 1430.291 through 1430.312).

##### §§ 1430.320-1430.331 [Removed]

B. Subpart—Regulations Governing Reduction in the Price of Milk Marketed by Producers, December 1, 1983 to March 31, 1985 (§§ 1430.320 through 1430.331).



**§§ 1430.340-1430.351 [Removed]**

C. Subpart—Regulations Governing Reductions in the Price of Milk Marketed by producers, January 1, 1988, to December 31, 1988 (§§ 1430.340 through 1430.351).

**§§ 1430.400-1430.422 [Removed]**

D. Subpart—Milk Diversion Program (§§ 1430.400 through 1430.422).

**PART 1435—[AMENDED]**

9. The authority citation for part 1435 is revised to read as follows:

Authority: 7 U.S.C. 1421 and 1446; 15 U.S.C. 714b and 714c.

10. 7 CFR part 1435 is amended by removing the following subparts:

**§§ 1435.76-1435.86 [Removed]**

A. Subpart—Price Support Purchase Agreement Program for 1982-Crop Sugar Beets and Sugarcane (§§ 1435.76 through 1435.86).

**§§ 1435.95-1435.107 [Removed]**

B. Subpart—Price Support Loan Program for 1982-Crop Sugar Beets and Sugarcane (§§ 1435.95 through 1435.107).

**§§ 1435.110-1435.123 [Removed]**

C. Subpart—Price Support Loan Program for the 1983 through 1985 Crops of Sugar Beets and Sugarcane (§§ 1435.110 through 1435.123).

**PART 1446—[AMENDED]**

11. The authority citation for part 1446 continues to read as follows:

Authority: 7 U.S.C. 1421 and 1441; 15 U.S.C. 714b and 714c.

12. 7 CFR part 1446 is amended by removing the following subparts:

**§§ 1446.1-1446.17 [Removed]**

A. Subpart—General Regulations Governing 1979 through 1981 Crop Peanut Warehouse Storage Loans and Handler Operations (§§ 1446.1 through 1446.17).

**§§ 1446.50-1446.67 [Removed]**

B. Subpart—General Regulations Governing 1982 through 1985 Crops Peanut Warehouse Storage Loans and Handler Operations (§§ 1446.50 through 1446.67).

**PART 1405—[AMENDED]**

13. The authority citation for part 1405 is revised to read as follows:

Authority: 15 U.S.C. 714b and 714c.

14. A new § 1405.4 is added to part 1405 to read as follows:

**§ 1405.4 State loan mediation programs.**

With respect to farm facility loans made in accordance with 7 CFR Part 1474, the Commodity Credit Corporation (CCC) will participate in mediations conducted pursuant to a State's agricultural loan mediation program under the same terms and conditions applicable to agricultural creditors generally and will cooperate in good faith in such mediations by complying with requests for information and analysis, and in presenting and exploring debt restructuring proposals whenever feasible, when that State is and remains a qualifying State as defined in 7 CFR 1466.2(b). CCC will not participate in such mediation programs with respect to commodity price support loans made in accordance with this title.

Signed this 13th, day of November at Washington, DC.

Keith D. Bjerke,

*Executive Vice President, Commodity Credit Corporation.*

[FR Doc. 89-29477 Filed 12-19-89; 8:45 am]

BILLING CODE 3410-05-M

**Office of Operations****7 CFR Parts 2810 and 2811****Statement of Agency Organization, Functions, and Availability of Information to the Public**

**AGENCY:** Office of Operations, USDA.

**ACTION:** Final rule.

**SUMMARY:** The Office of Operations publishes its statement of organization and functions and availability of information to the public.

**EFFECTIVE DATE:** December 20, 1989.

**FOR FURTHER INFORMATION CONTACT:** Bonnie Gray, Office of Operations, U.S. Department of Agriculture, Room 134-W, Administration Building, Washington, DC 20250. Telephone (202) 447-5008.

**SUPPLEMENTARY INFORMATION:** This rule relates to internal agency management. Therefore, the notice of proposed rulemaking and opportunity for comment required by 5 U.S.C. 553 are not applicable. This rule may be made effective less than 30 days after publication in the Federal Register. This rule does not constitute a "major rule" within the meaning of Executive Order No. 12291 (Improving Government Regulations). Nor will these regulations cause a significant economic impact or other substantial effect on small entities. Therefore, the requirements of the Regulatory Flexibility Act, 5 U.S.C. 605(b), do not apply.

**List of Subjects****7 CFR Part 2810**

Organization and Functions (Government agencies).

**7 CFR Part 2811**

Availability of information to the public.

Accordingly, parts 2810 and 2811 are added to read as follows:

**PART 2810—ORGANIZATION AND FUNCTIONS—OFFICE OF OPERATIONS****Sec.**

2810.1 General Statement.

2810.2 Organization.

2810.3 Functions.

Authority: 5 U.S.C. 301 and 552; 7 CFR 2.76.

**§ 2810.1 General Statement.**

This part is issued in accordance with 5 U.S.C. 552(a) to provide guidance for the general public as to Office of Operations (OO) organization and functions.

**§ 2810.2 Organization.**

The Office of Operations (OO) was established January 12, 1982. Delegations of authority to the Director, OO, appear at 7 CFR 2.76. The organization is comprised of six divisions and one staff located at Department headquarters. Description of the functions of these organizational units are in the following section. The organization is headed by a Director.

**§ 2810.3 Functions.**

(a) *Director.* Provides executive direction for OO. Develops and promulgates overall policies and provides general direction, leadership, oversight, and coordination of USDA management of procurement, real and personal property activities, mail and copier management. Provides executive services to the Office of the Secretary and operates activities providing consolidated USDA administrative functions and services.

(b) *Deputy Director.* Assists the Director, and in the absence of the Director, serves as Acting Director.

(c) *Administrative Unit.* Provides support for agency management regarding budget, accounting, personnel, and other administrative matters.

(d) *Executive Services Division.* Provides executive services to the Office of the Secretary in travel arrangements, supplies, furnishings, communications, equipment, and records. Operates the central USDA DC imprest fund.

(e) *Facilities Management Division.* Operates and maintains the USDA DC



headquarters building complex, including headquarters parking. Oversees management and operation of USDA buildings nationwide, and provides DC area labor services.

(f) *Mail and Reproduction Management Division.* Oversees USDA mail, copier, and duplicating programs. Operates DC area central activities in these areas.

(g) *Personal Property Management Division.* Oversees USDA supply, motor vehicle, and personal property programs. Operates centralized warehouse and property rehabilitation facilities.

(h) *Procurement Division.* Oversees USDA procurement programs. Operates centralized purchasing operations for ADP and Washington area activities.

(i) *Real Property Management Division.* Oversees USDA real property management programs.

## PART 2811—AVAILABILITY OF INFORMATION TO THE PUBLIC

### Sec.

- 2811.1 General statement.
- 2811.2 Public inspection and copying.
- 2811.3 Indexes.
- 2811.4 Initial request for records.
- 2811.5 Appeals.
- 2811.6 Fee schedule.

### Appendix A—List of Addresses

Authority: 5 U.S.C. 301 and 552 (as amended); 7 CFR 1.3.

#### § 2811.1 General statement.

This part is issued in accordance with 7 CFR 1.3 of the Department of Agriculture regulations governing the availability of records (7 CFR 1.1–1.23 and Appendix A) under the Freedom of Information Act (FOIA), 5 U.S.C. 552. The Department's regulations, as supplemented by the regulations in this part, provide guidance for any person wishing to request records from Office of Operations.

#### § 2811.2 Public inspection and copying.

(a) *Background.* 5 U.S.C. 552(a)(2) requires that each agency maintain and make available for public inspection and copying certain kinds of records.

(b) *Procedure.* To gain access to OO records that are available for public inspection, contact the division that maintains them. See Appendix A, List of Addresses, for the location and hours of operation.

#### § 2811.3 Indexes.

(a) *Background.* 15 U.S.C. 552(a)(2) also requires that each agency maintain and make available for public inspection and copying current indexes provided identifying information for the public with regard to any records which are

made available for public inspection and copying. OO does not maintain any materials within the scope of these requirements.

#### § 2811.4 Initial requests for records.

(a) *Background.* The head of each OO division, each OO contracting officer, each OO leasing officer, and the OO FOIA officer is authorized to:

(1) Grant or deny requests for OO records.

(2) Make discretionary release of OO records when it is determined that the public interest in disclosure outweighs the public and/or private ones in withholding.

(3) Reduce or waive fees to be charged where determined to be appropriate.

(4) Refer a request to the OO FOIA Officer for determination.

(b) *Procedures.* Persons wishing to request records from the Office of Operations may do so as follows:

(1) How. Submit each initial request for OO records as prescribed in 7 CFR 1.6.

(2) Where. Submit each initial request to the head of the unit that maintains the records. See Appendix A, List of Addresses. Contact the FOIA Officer for guidance as needed. Or, submit the request to the FOIA Officer for forwarding to the proper officials: FOIA Officer, Office of Operations, USDA, Room 134-W Administration Building, 14th & Independence Avenue SW., Washington, DC 20250.

#### § 2811.5 Appeals.

*Procedure.* Any person whose initial request is denied in whole or in part may appeal that denial, in accordance with 7 CFR 1.6(e) and 1.8, to the Director, Office of Operations, USDA, Room 113-W Administration Building, 14th & Independence Avenue SW., Washington, DC 20250.

#### § 2811.6 Fee schedule.

Department regulations provide for a schedule of reasonable standard charges for document search and duplication. See 7 CFR 1.2(b). Fees to be charged are set forth in 7 CFR part 1, subpart A, Appendix A.

### Appendix A—List of Addresses

#### Section 1. General

This list provides the titles and mailing address of officials who have custody of OO records. The normal working hours of these offices are 8:30 a.m. to 5:00 p.m., Monday through Friday, excluding holidays, during which public inspection and copying of certain kinds of records is permitted.

#### Section 2. List of Addresses

All of the following addresses are located at 14th Street and Independence Avenue, Washington, DC. Address mail as follows:

Director, Office of Operations, USDA, Room 113-W Administration Building, Washington, DC 20250.

FOIA Officer, Office of Operations, USDA, Room 134-W Administration Building, Washington, DC 20250.

Chief, Administrative Unit, Office of Operations, USDA, Room 134-W, Washington, DC 20250.

Chief, Executive Services Division, Office of Operations, USDA, Room 10-A, Administration Building, Washington, DC 20250.

Chief, Facilities Management Division, Office of Operations, USDA, Room S-313 South Building, Washington, DC 20250.

Chief, Mail and Reproduction Management Division, Office of Operations, USDA, Room 1540 South Building, Washington, DC 20250.

Chief, Personal Property Management Division, Office of Operations, USDA, Room 1524 South Building, Washington, DC 20250.

Chief, Procurement Division, Office of Operations, USDA, Room 1550 South Building, Washington, DC 20250.

Chief, Real Property Management Division, Office of Operations, USDA, Room 1566, South Building, Washington, DC 20250.

Signed at Washington, DC, this 14th day of December, 1989.

Frank Gearde, Jr.,

Director, Office of Operations.

[FR Doc. 89-29572 Filed 12-19-89; 8:45 am]

BILLING CODE 3410-98-M

## NATIONAL CREDIT UNION ADMINISTRATION

### 12 CFR Part 700

#### Definitions

**AGENCY:** National Credit Union Administration (NCUA).

**ACTION:** Correction.

**SUMMARY:** On November 22, 1989, a final rule was published in the *Federal Register* (54 FR 48231, FR Doc. 89-27241) which amended § 700.1 of the NCUA Rules and Regulations by adding a new paragraph (j), as well as changing several other provisions. The redesignation of § 700.1(l) to § 700.1(m) was inadvertently left out of instruction 2a. in the final rule. This document makes the necessary correction to instruction 2a. so that newly-redesignated § 700.1(m) will appear in the recodification of the Code of Federal Regulations.

**EFFECTIVE DATE:** December 22, 1989.

**ADDRESS:** National Credit Union Administration, 1776 G Street NW., Washington 20456.

**FOR FURTHER INFORMATION CONTACT:** D. Michael Riley, Director, or Nicholas



Veghts, Deputy Director, Office of Examination and Insurance at the above address or telephone (202) 682-9640.

By the National Credit Union Administration Board on December 14, 1989.

Becky Baker,

Secretary of the Board.

Accordingly, Instruction 2a. of FR Doc. 89-27241 published in the Federal Register on November 22, 1989, in column 2 at page 48234 is corrected to read as follows:

#### PART 700—DEFINITIONS

##### § 700.1 [Corrected]

2. Section 700.1 is amended as follows:  
a. Current section 700.1(l) is redesignated as § 700.1(m), current § 700.1(k) is redesignated as § 700.1(l), and current § 700.1(j) is redesignated as § 700.1(k).

[FR Doc. 89-29573 Filed 12-19-89; 8:45 am]

BILLING CODE 7535-01-M

#### DEPARTMENT OF TRANSPORTATION

##### Federal Aviation Administration

##### 14 CFR Part 71

[Airspace Docket No. 89-ASW-35]

##### Establishment of Control Zone; Lake Charles Chennault Industrial Airpark, LA

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

**SUMMARY:** This amendment will establish a part-time control zone at Lake Charles Chennault Industrial Airpark, LA. The action is necessary because there is a part-time nonfederal airport traffic control tower (ATCT) at the Chennault Industrial Airpark and a federally certified weather observer who is qualified to take hourly and special weather observations at the Chennault Industrial Airpark during the times the control zone will be in effect. The intended effect of this amendment is to provide adequate controlled airspace for aircraft executing all standard instrument approach procedures (SIAPs) serving the airpark. The establishment of a control zone will allow the Chennault Industrial Airpark to be used as an alternate airport under instrument flight rules (IFR) weather conditions.

**EFFECTIVE DATE:** 0901 U.T.C., March 8, 1990.

**FOR FURTHER INFORMATION CONTACT:** Bruce C. Beard, System Management

Branch, Air Traffic Division, Southwest Region, Department of Transportation, Federal Aviation Administration, Fort Worth, TX 76193-0530, telephone (817) 624-5581.

#### SUPPLEMENTARY INFORMATION:

##### History

On August 23, 1969, the FAA proposed to amend Part 71 of the Federal Aviation Regulations (14 CFR Part 71) to establish a control zone at Lake Charles Chennault Industrial Airpark (54 FR 37339).

Interested persons were invited to participate in this rulemaking proceeding by submitting written comments on the proposal to the FAA. One comment was received from a pilot who uses the Chloe Airport, located just north of the Chennault Industrial Airpark, which would be within the new control zone. His concern was that the new control zone will impair his freedom to use the Chloe Airport; however, since he never flies when the weather is less than visual flight rules (VFR) conditions, he did not object to the establishment of the control zone. The only time the control zone would actually affect this commenter's ability to fly into or out of the Chloe Airport would be when the weather is IFR.

No other comments objecting to the same as proposal were received. Except for editorial changes, this amendment is that proposed in the notice. Section 71.171 of part 71 of the Federal Aviation Regulations was republished in Handbook 7400.6E, dated January 3, 1989.

##### The Rule

This amendment of part 71 of the Federal Aviation Regulations will establish a control zone at Lake Charles Chennault Industrial Airpark. The action is necessary because Chennault Industrial Airpark meets the criteria for the creation of a control zone by the fact that there is a part-time nonfederal ATCT at the Chennault Industrial Airpark and a federally certified weather observer who is qualified to take hourly and special weather observations at the Chennault Industrial Airpark during the times the control zone is in effect. The intended effect of this amendment is to provide adequate controlled airspace for aircraft executing all SIAPs serving the airpark. The establishment of a control zone will allow the Chennault Industrial Airpark to be used as an alternate airport under IFR weather conditions. The new control zone will exclude that portion within the Lake Charles, LA, Control Zone.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore—(1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

##### List of Subjects in 14 CFR Part 71

Aviation safety, Control zones.

##### Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me, part 71 of the Federal Aviation Regulations (14 CFR part 71) is amended as follows:

#### PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES CONTROLLED AIRSPACE, AND REPORTING POINTS

1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; Executive Order 10854; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

##### § 71.171 [Amended]

2. Section 71.171 is amended as follows:

##### Lake Charles Chennault Industrial Airpark, LA [New]

Within a 5-mile radius of the Chennault Industrial Airpark (latitude 30°12'45"N., longitude 93°08'36"W.), excluding that portion within the Lake Charles, LA, Control Zone. This control zone is effective during the specific dates and times established in advance by a notice to airmen. The effective dates and times will thereafter be continuously published in the Airport Facility Directory.

Issued in Fort Worth, TX, on December 4, 1989.

Larry L. Craig,

Manager, Air Traffic Division, Southwest Region.

[FR Doc. 89-29546 Filed 12-19-89; 8:45 am]

BILLING CODE 4910-13-M



**14 CFR Part 71**

[Airspace Docket No. 89-ASW-08]

**Establishment of Control Zone;  
Norman, OK****AGENCY:** Federal Aviation Administration (FAA), DOT.**ACTION:** Final rule.

**SUMMARY:** This amendment will establish a control zone at Norman, OK. This action is necessary because the University of Oklahoma (OU) Westheimer Airpark meets the criteria for the establishment of a control zone by the fact that there is a part-time nonfederal airport traffic control tower (ATCT) and a new automated weather observation system (AWOS III), which was commissioned on June 30, 1989, at the OU Westheimer Airpark. The intended effect of this amendment is to provide adequate controlled airspace for aircraft executing the standard instrument approach procedure (SIAP) now serving the OU Westheimer Airpark.

**EFFECTIVE DATE:** 0901 u.t.c., March 8, 1990.

**FOR FURTHER INFORMATION CONTACT:** Bruce C. Beard, System Management Branch, Air Traffic Division, Southwest Region, Department of Transportation, Federal Aviation Administration, Fort Worth, TX 76193-0530, telephone (817) 624-5561.

**SUPPLEMENTARY INFORMATION:****History**

On August 21, 1989, the FAA proposed to amend part 71 of the Federal Aviation Regulations (14 CFR part 71) to establish a control zone at Norman, OK (54 FR 38253).

Interested persons were invited to participate in this rulemaking proceeding by submitting written comments on the proposal to the FAA. No comments objecting to the proposal were received. Except for editorial changes, this amendment is the same as that proposed in the notice. Section 71.171 of part 71 of the Federal Aviation Regulations was published in Handbook 7400.6E, dated January 3, 1989.

**The Rule**

This amendment to part 71 of the Federal Aviation Regulations will establish a control zone at Norman OK. This action is necessary because the OU Westheimer Airpark meets the criteria for the establishment of a control zone by the fact that there is a part-time nonfederal ATCT at the OU Westheimer Airpark and a new AWOS III, which was commissioned on June 30, 1989. The

designation of a control zone will allow the OU Westheimer Airpark to be used as an alternate airport under instrument flight rules (IFR) weather conditions. The intended effect of this amendment is to provide adequate controlled airspace for aircraft executing the standard instrument approach procedure (SIAP) now serving the OU Westheimer Airpark.

Advisory Circular (AC) 150/5220-16, AWOS for Non-Federal Applications, states that AWOS meets the criteria for non-Federal application set forth in the circular and is approved by the National Weather Service as an official source of aviation weather reports. FAA Order 8000.69, paragraph 6d, dated March 23, 1989, states in part that non-Federal AWOS-III's installed, maintained, and operated in accordance with the standards and specifications contained in AC 150/5220-16 are approved for FAR Parts 121 and 135 flight operations, without restrictions. Additionally, FAA Order 8000.69, paragraph 7d, states in part that AWOS-III's established under the guidelines set forth in AC 150/5220-16 are considered the sole official source of weather observations for those airports.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore—(1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

**List of Subjects in 14 CFR Part 71**

Aviation safety, Control zones.

**Adoption of the Amendment****PART 71—[AMENDED]**

Accordingly, pursuant to the authority delegated to me, part 71 of the Federal Aviation Regulations (14 CFR part 71) is amended as follows:

**PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES CONTROLLED AIRSPACE, AND REPORTING POINTS**

1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; Executive Order 10854; 49 U.S.C. 106(g) [Revised Pub. L. 97-449, January 12, 1983]; 14 CFR 11.69.

**§ 71.171 [Amended]**

2. Section 71.171 is amended as follows:

**Norman, OK [New]**

Within a 5-mile radius of the University of Oklahoma Westheimer Airpark (latitude 35°14'30"N., longitude 97°28'00"W.). This control zone is effective during the specific dates and times established in advance by a notice to airmen. The effective dates and times will thereafter be continuously published in the Airport/Facility Directory.

Issued in Fort Worth, TX, on December 4, 1989.

Larry L. Craig,

Manager, Air Traffic Division, Southwest Region.

[FR Doc. 89-29547 Filed 12-19-89; 8:45 am]

BILLING CODE 4910-13-M

**14 CFR Part 71**

[Airspace Docket No. 89-ASW-21]

**Removal of Transition Area;  
Brackettville, TX****AGENCY:** Federal Aviation Administration (FAA), DOT.**ACTION:** Final rule.

**SUMMARY:** This amendment will remove the transition area located at Brackettville, TX. On May 1, 1989, the only standard instrument approach procedure (SIAP) serving the Los Medanos Ranch Airport, the RNAV RWY 30 SIAP, was canceled. The cancellation of this SIAP has made this amendment necessary. The intended effect of this amendment is to return to public use that controlled airspace no longer required due to the cancellation of the RNAV RWY 30 SIAP. Coincident with this amendment will be the changing of the status of the Los Medanos Ranch Airport from instrument flight rules (IFR) to visual flight rules (VFR).

**EFFECTIVE DATE:** 0901 u.t.c., March 8, 1990.

**FOR FURTHER INFORMATION CONTACT:** Bruce C. Beard, System Management Branch, Air Traffic Division, Southwest Region, Department of Transportation, Federal Aviation Administration, Fort Worth, TX 76193-0530, telephone (817) 624-5561.

**SUPPLEMENTARY INFORMATION:****History**

On August 17, 1989, the FAA proposed to amend part 71 of the Federal Aviation



Regulations (14 CFR part 71) to remove the transition area located at Brackettville, TX (54 FR 35666).

Interested persons were invited to participate in this rulemaking proceeding by submitting written comments on the proposal to the FAA. No comments objecting to the proposal were received. Except for editorial changes, this amendment is the same as that proposed in the notice. Section 71.181 of part 71 of the Federal Aviation Regulations was republished in Handbook 7400.6E, dated January 3, 1989.

#### The Rule

This amendment to part 71 of the Federal Aviation Regulations will remove the transition area located at Brackettville, TX. On May 1, 1989, the only SIAP serving the Los Medanos Ranch Airport, RNAV RWY 30, was canceled. The cancellation of this SIAP has removed the need for this transition area, thus necessitating this amendment. The intended effect of this amendment is to return to public use that controlled airspace no longer required due to the cancellation of the RNAV RWY 30 SIAP. Coincident with this amendment will be the changing of the status of the Los Medanos Ranch Airport from IFR to VFR.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore—(1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### List of Subjects in 14 CFR Part 71

Aviation Safety, Transition areas.

#### Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me, part 71 of the Federal Aviation Regulations (14 CFR part 71) is amended as follows:

#### PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE, AND REPORTING POINTS

1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; Executive Order 10854; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

#### § 71.181 [Amended]

2. Section 71.181 is amended as follows:

Brackettville, TX [Removed]

Issued in Fort Worth, TX, on December 4, 1989.

Larry L. Craig,

Manager, Air Traffic Division, Southwest Region.

[FR Doc. 89-29548 Filed 12-19-89; 8:45 am]

BILLING CODE 4910-13-M

#### DEPARTMENT OF COMMERCE

#### Bureau of Export Administration

#### 15 CFR Parts 776 and 799

[Docket No. 91176-9276]

#### Expansion and Imposition of Foreign Policy Controls on Chemical Weapon Precursors

**AGENCY:** Bureau of Export Administration, Commerce.

**ACTION:** Interim rule with request for public comment.

**SUMMARY:** In support of U.S. foreign policy, and particularly U.S. policies of opposing the proliferation and prohibited use of chemical weapons, the Department of Commerce is revising the foreign policy controls on exports of certain chemical weapon precursors, *i.e.*, chemicals that can be used in the manufacture of chemical weapons. This rule makes several significant revisions which are discussed in detail in **SUPPLEMENTARY INFORMATION.**

**DATES:** This rule is effective December 20, 1989. Comments must be received by February 20, 1990.

**ADDRESSES:** Written comments (six copies) should be sent to Sharon Gongwer, Office of Technology and Policy Analysis, Bureau of Export Administration, Department of Commerce, P.O. Box 273, Washington, DC 20044.

**FOR FURTHER INFORMATION CONTACT:** For questions on the foreign policy export controls, call Toni Jackson, Bureau of Export Administration, Telephone: (202) 377-4531.

For questions of a technical nature on chemical weapon precursors, call Jo-Anne Jackson, Bureau of Export Administration, Telephone: (202) 377-5953 or James Seevaratram, Bureau of Export Administration, Telephone: (202) 377-5695.

**SUPPLEMENTARY INFORMATION:** First, this rule expands the number of countries to which a license is required for the export of phosphorus trichloride, thionyl chloride, and trimethyl phosphite. A validated license is now required for the export of these three chemicals to all destinations except NATO member countries, Australia, Austria, Ireland, Japan, New Zealand, and Switzerland.

Second, this rule imposes foreign policy controls on ten additional chemicals. To prevent proliferation of chemical weapons, a validated license is now required for export to Iran, Iraq, Syria, and Libya of potassium hydrogen fluoride, ammonium hydrogen fluoride, sodium fluoride, sodium bifluoride, phosphorus pentasulfide, sodium cyanide, triethanolamine, diisopropylamine, sodium sulfide, and N,N-diethylethanolamine.

The Department of Commerce has submitted a report to Congress under Section 6 of the Export Administration Act of 1979, as amended, to support the imposition and expansion of the foreign policy controls. The general policy will be to deny exports to Iran, Iraq, Libya, and Syria.

Third, the foreign policy controls imposed by this rule harmonize our controls with other countries with whom the United States consults, such as the Australia Group. This rule adjusts U.S. controls on precursor chemicals to require a validated export license for all countries except NATO, Australia, Austria, Ireland, Japan, New Zealand, and Switzerland for the nine precursors identified on the Australia Group Core List, and to require a validated export license for Country Groups S and Z, Iran, Iraq, and Syria for the forty-one precursors identified on the Australia Group Warning List.

Fourth, this rule revises the Export Administration Regulations (EAR) to require authorization for reexport to Iran, Iraq, Syria and Libya of chemicals controlled under ECCNs 4798B and 5798F. This requirement does not apply to reexports from NATO member countries, Australia, Austria, New Zealand, Ireland, Japan and Switzerland because those countries maintain controls on these precursor chemicals. This action will strengthen U.S. export controls by preventing transfers of U.S.



chemicals to countries that pose proliferation concerns.

In addition, this rule revises 776.19 of the EAR to make needed corrections and to require exporters to include the Chemical Abstract Service Registry (C.A.S.) number before the chemical name on the Application for Export License (Form BXA-622P) when requesting authorization to export chemical weapon precursors.

Finally, this rule adds a new "Interpretation 23: Precursor Chemicals" to Supplement No. 1 to § 799.2 (Commodity Interpretations). This new Interpretation provides the C.A.S. number and precursor chemical synonyms, *i.e.*, alternative names for chemicals.

#### Saving Clause

Shipments of items removed from general license authorizations as a result of this regulation that were on dock for lading, on lighter, laden aboard an exporting carrier, or an en route aboard carrier to a port of export pursuant to actual orders for export before December 26, 1989, may be exported under the previous general license provisions up to and including January 8, 1990. Any such items not actually exported before midnight January 8, 1990, require a validated export license in accordance with this regulation.

#### Rulemaking Requirements

1. This rule is consistent with Executive Orders 12291 and 12661.
2. This rule involves collections of information subject to the requirements of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*). These collections have been approved by the Office of Management and Budget under control number 0694-0005 and 0694-0010.
3. This rule does not contain policies with Federalism implications sufficient to warrant preparation of a Federalism assessment under Executive Order 12612.
4. Because a notice of proposed rulemaking and an opportunity for public comment are not required to be given for this rule by section 553 of the Administrative Procedure Act (5 U.S.C. 553), or by any other law, under sections 603(a) and 604(a) of the Regulatory Flexibility Act (5 U.S.C. 603(a) and 604(a)) no initial or final Regulatory Flexibility Analysis has to be or will be prepared.
5. Section 13(a) of the Export Administration Act of 1979 (EAA), as amended (50 U.S.C. app. 2412(a)), exempts this rule from all requirements of section 553 of the Administrative

Procedure Act (APA) (5 U.S.C. 553), including those requiring publication of a notice of proposed rulemaking, an opportunity for public comment, and a delay in effective date. Further, no other law requires that a notice of proposed rulemaking and an opportunity for public comment be given for this rule.

However, because of the importance of the issues raised by these regulations, this rule is issued in interim form and, consistent with section 13(b) of the EAA, comments will be considered in the development of final regulations. Publishing this rule in proposed form would impair BXA's ability to impose effective and timely controls.

The period for submission of comments will close February 20, 1990. The Department will consider all comments received before the close of the comment period in developing final regulations. Comments received after the end of the comment period will be considered if possible, but their consideration cannot be assured. Accordingly, the Department encourages interested persons who wish to comment to do so at the earliest possible time to permit the fullest consideration of their views.

The Department will not accept public comments accompanied by a request that part or all of the material be treated confidentially because of its business proprietary nature or for any other reason. The Department will return such comments and material to the person submitting the comments and will not consider them in the development of final regulations.

All public comments on these regulations will be a matter of public record and will be available for public inspection and copying. In the interest of accuracy and completeness, the Department requires comments in written form. Oral comments must be followed by written memoranda, which will also be a matter of public record and will be available for public review and copying. Communications from agencies of the United States Government or foreign governments will not be made available for public inspection.

The public record concerning these regulations will be maintained in the Bureau of Export Administration Freedom of Information Records Inspection Facility, Room 4886, U.S. Department of Commerce, 14th Street and Pennsylvania Avenue NW., Washington, DC 20230. Records in this facility, including written public comments and memoranda summarizing the substance of oral communications, may be inspected and copied in accordance with regulations published

in part 4 of title 15 of the Code of Federal Regulations. Information about the inspection and copying of records may be obtained from Margaret Cornejo, Bureau of Export Administration Freedom of Information Officer, at the above address or by calling (202) 377-2593. Comments should be submitted to Sharon Gongwer, Office of Technology and Policy Analysis, Bureau of Export Administration, Department of Commerce, P.O. Box 273, Washington, DC 20044.

#### List of Subjects in 15 CFR Parts 776 and 799

Exports, Reporting and recordkeeping requirements.

Accordingly, the Export Administration Regulations (15 CFR Parts 730-799) are amended as follows:

#### PART 776—[AMENDED]

1. The authority citation for part 776 is revised to read as follows:

Authority: Pub. L. 96-72, 93 Stat. 503 (50 U.S.C. app. 2401 *et seq.*), as amended by Pub. L. 97-145 of December 19, 1981; by Pub. L. 99-64 of July 12, 1985; and by Pub. L. 100-418 of August 23, 1988; E.O. 12525 of July 12, 1985 (50 FR 28757, July 18, 1985).

2. Section 776.19 paragraph (a) is revised to read as follows:

#### § 776.19 Chemical and biological agents.

(a) The following controls are maintained in support of U.S. foreign policy, and particularly the U.S. policies of opposing the proliferation and illegal use of chemical and biological weapons:

(i) Chemicals identified in ECCN 4798B require a validated license for export from the United States to all destinations except Australia, Austria, Belgium, Canada, Denmark, the Federal Republic of Germany, France, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Switzerland, Turkey and the United Kingdom;

(ii) Chemicals identified in ECCN 5798F require a validated license for export from the United States to Iran, Iraq, Libya and Syria;

(iii) Viruses and viroids identified in ECCN 4997B and bacteria, fungi and protozoa identified in ECCN 4998B require a validated license to all destinations except Canada.

3. Section 776.19 is amended as follows:

In paragraph (b), by revising the phrase "paragraph (c), (d) or (e)" to read "paragraphs (c), (d), (e), (f), (g) or (h)"



and by removing "5799C" in the first sentence;

In paragraph (c), by inserting the phrase "from the United States" between "the following chemicals" and "to Syria" in the first sentence;

In paragraph (d), by inserting the phrase "from the United States" between "the following chemicals" and "to Iran, Iraq or Syria" in the first sentence;

In paragraph (e), by inserting the phrase "from the United States" between "4998B" and "to Iran, Iraq or Syria" in the first sentence.

4. Section 776.19 is amended by removing paragraph (g), by redesignating paragraph (f) as paragraph (i), and by adding new paragraphs (f), (g), (h), (j), (k), and (l) to read as follows:

(f) Applications to export the following chemicals from the United States to Iran, Iraq, Libya or Syria, in performance of a contract entered into before (Notice To Congress), will generally be approved: potassium hydrogen fluoride, ammonium hydrogen fluoride, sodium fluoride, sodium bifluoride, phosphorus pentasulfide, sodium cyanide, triethanolamine, diisopropylamine, sodium sulfide, and N,N-diethylethanolamine.

(g) Applications to export phosphorus trichloride, trimethyl phosphite, and thionyl chloride from the United States to all destinations, except those described below, in performance of a contract entered into before (Notice to Congress), will generally be approved. This provision does not apply to exports to Country Groups S and Z or to military or police entities in South Africa and Namibia. For exports to Iran, Iraq and Syria, paragraph (d) of this section applies.

(h) Consistent with part 774, the reexport to Iran, Iraq, Libya or Syria of chemicals controlled under ECCNs 4798B and 5798F is prohibited without authorization requirement does not apply to reexports from NATO member countries, Australia, Austria, New Zealand, Ireland, Japan and Switzerland. Applications to reexport to Iran, Iraq, Libya or Syria, in performance of a contract entered into before (Notice to Congress), will generally be approved.

(i) \*\*\*

(j) The reexport provisions of part 774 are not applicable to the foreign policy controls of this section on viruses and viroids identified under ECCN 4997B and bacteria, fungi and protozoa identified under ECCN 4998B. However, the export of those commodities from the United States to any destination with knowledge that they will be reexported directly or indirectly, in

whole or in part, to Iran, Iraq, Syria or Libya is prohibited without a validated license.

(k) The provisions of § 776.12 are not applicable to the foreign policy controls of this section.

(l) When preparing a license application for chemicals, applicants shall type the Chemical Abstract Service (C.A.S.) Registry number in Item 9(b) before each chemical name. The C.A.S. numbers are listed with the controlled chemicals in ECCNs 4798B and 5798F under the "List of Chemicals." See Supplement No. 1 to § 799.2, Interpretation 23: Precursor Chemicals, for synonyms of controlled chemicals in ECCNs 4798B and 5798F.

#### PART 799—[AMENDED]

4a. The authority citation for part 799 continues to read as follows:

Authority: Pub. L. 96-72, 93 Stat. 503 (50 U.S.C. app. 2401 *et seq.*), as amended by Pub. L. 97-145 of December 29, 1981; by Pub. L. 99-64 of July 12, 1985; and by Pub. L. 100-418 of August 23, 1988; E.O. 12525 of July 12, 1985 (50 FR 28757, July 16, 1985); Pub. L. 95-223 of December 28, 1977 (50 U.S.C. 1701 *et seq.*); E.O. 12532 of September 9, 1985 (50 FR 36861, September 10, 1985) as affected by notice of September 4, 1986 (51 FR 31925, September 8, 1986); Pub. L. 99-440 of October 2, 1986 (22 U.S.C. 5001 *et seq.*); and E.O. 12571 of October 27, 1986 (51 FR 39505, October 29, 1986).

#### Supplement No. 1 to § 799.1 [Amended]

5. In Supplement No. 1 to § 799.1 (the Commodity Control List), Commodity Group 7 (Chemicals, Metalloids, Petroleum Products and Related Materials), ECCN 4798B is amended by inserting "Austria," between "Australia," and "Belgium" in the Validated License Required paragraph; by revising the Special Foreign Policy Controls paragraph and by revising the "List of Chemicals Controlled by ECCN 4798B" to read as follows:

#### 4798B Precursor and intermediate chemicals used in the production of chemical warfare agents.

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*Special Foreign Policy Controls:* This validated license requirement is maintained to prevent diversion to Iran, Iraq, Syria, and Libya for use in chemical warfare.

#### List of Chemicals Controlled by ECCN 4798B

(See Supplement No. 1 to § 799.2, Interpretation 23: Precursor Chemicals, for synonyms for the following chemicals)

(1) (C.A.S. #756-79-6) Dimethyl methylphosphonate;

(2) (C.A.S. #868-85-9) Dimethyl phosphite (dimethyl hydrogen phosphite);

(3) (C.A.S. #676-97-1) Methylphosphonyl dichloride;

(4) (C.A.S. #676-99-3) Methylphosphonyl difluoride;

(5) (C.A.S. #10025-87-3) Phosphorus oxychloride;

(6) (C.A.S. #7719-12-2) Phosphorus trichloride;

(7) (C.A.S. #111-48-8) Thiodiglycol;

(8) (C.A.S. #7719-09-7) Thionyl chloride; and

(9) (C.A.S. #121-45-8) Trimethyl phosphite.

6. In Supplement No. 1 to § 799.1 (the Commodity Control List), Commodity Group 7 (Chemicals, Metalloids, Petroleum Products and Related Materials), ECCN 5798F is amended by revising the heading, adding a "Special Foreign Policy Controls" paragraph, and adding a "List of Chemicals Controlled by ECCN 5798F" at the end of the entry reading as follows:

**5798F Chemicals, as described in this entry.**

#### Controls for ECCN 5798F

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*Special South Africa and Namibia Controls:* \*\*\*

*Special Foreign Policy Controls:* This validated license requirement is maintained for Iran, Iraq, Syria, and Libya to prevent chemical weapons proliferation.

#### List of Chemicals Controlled by ECCN 5798F

(See Supplement No. 1 to § 799.2, Interpretation 23: Precursor Chemicals, for synonyms for the following chemicals)

(1) (C.A.S. #1341-49-7) Ammonium hydrogen fluoride;

(2) (C.A.S. #7784-34-1) Arsenic trichloride;

(3) (C.A.S. #76-93-7) Benzoic acid;

(4) (C.A.S. #107-07-3) 2-Chloroethanol;

(5) (C.A.S. #78-38-6) Diethyl ethylphosphonate;

(6) (C.A.S. #15715-41-0) Diethyl methylphosphonite;

(7) (C.A.S. #2404-03-7) Diethyl-N,N-dimethylphosphoramidate;

(8) (C.A.S. #762-04-9) Diethyl phosphite;

(9) (C.A.S. #100-37-8) N,N-Diethylethanolamine;

(10) (C.A.S. #5842-07-9) N,N-Diisopropyl-beta-aminoethane thiol;

(11) (C.A.S. #96-80-0) N,N-Diisopropyl-beta-aminoethanol;



- (12) [C.A.S. #96-79-7] N,N-Diisopropyl-beta-aminoethyl chloride;  
 (13) [C.A.S. #108-18-9] Diisopropylamine;  
 (14) [C.A.S. #6163-75-3] Dimethyl ethylphosphonate;  
 (15) [C.A.S. #124-40-3] Dimethylamine;  
 (16) [C.A.S. #506-59-2] Dimethylamine hydrochloride;  
 (17) [C.A.S. #57856-11-8] O-Ethyl-2-diisopropylaminoethyl methylphosphonite (QL);  
 (18) [C.A.S. #1498-40-4] Ethylphosphonous dichloride [Ethylphosphinyl dichloride];<sup>1</sup>  
 (19) [C.A.S. #430-78-4] Ethylphosphonous difluoride [Ethylphosphinyl difluoride];<sup>1</sup>  
 (20) [C.A.S. #1066-50-8] Ethylphosphonyl dichloride;  
 (21) [C.A.S. #753-98-0] Ethylphosphonyl difluoride;  
 (22) [C.A.S. #7684-39-3] Hydrogen fluoride;  
 (23) [C.A.S. #3554-74-3] 3-Hydroxyl-1-methylpiperidine;  
 (24) [C.A.S. #76-89-1] Methyl benzilate;  
 (25) [C.A.S. #676-83-5] Methylphosphonous dichloride [Methylphosphinyl dichloride];<sup>1</sup>  
 (26) [C.A.S. #753-59-3] Methylphosphonous difluoride [Methylphosphinyl difluoride];<sup>1</sup>  
 (27) [C.A.S. #10026-13-8] Phosphorus pentachloride;  
 (28) [C.A.S. #1314-80-3] Phosphorus pentasulfide;  
 (29) [C.A.S. #75-97-8] Pinacolone;  
 (30) [C.A.S. #464-07-3] Pinacolyl alcohol;  
 (31) [C.A.S. #151-50-8] Potassium cyanide;  
 (32) [C.A.S. #7789-23-3] Potassium fluoride;  
 (33) [C.A.S. #7789-29-9] Potassium hydrogen fluoride;  
 (34) [C.A.S. #1619-34-7] 3-Quinuclidinol;  
 (35) [C.A.S. #3731-38-2] 3-Quinuclidinone;  
 (36) [C.A.S. #1333-83-1] Sodium bifluoride;  
 (37) [C.A.S. #143-33-9] Sodium cyanide;  
 (38) [C.A.S. #7681-49-4] Sodium fluoride;  
 (39) [C.A.S. #1313-82-2] Sodium sulfide;  
 (40) [C.A.S. #102-71-6] Triethanolamine; and  
 (41) [C.A.S. #122-52-1] Triethyl phosphite.

7. In Supplement No. 1 to § 799.1 (the Commodity Control List), Commodity

Group 7 (Chemicals, Metalloids, Petroleum Products and Related Materials), ECCN 5799C is removed.

#### Supplement No. 1 to § 799.2 [Amended]

8. In Supplement No. 1 to § 799.2 (Commodity interpretations), a new "Interpretation 23: Precursor Chemicals" is added to read as follows:

#### Interpretation 23: Precursor Chemicals

Following is a listing of chemicals controlled by ECCN 4798B and ECCN 5798F that includes their Chemical Abstract Service Registry (C.A.S.) number and synonyms, *i.e.*, alternative names.

(a) The chemicals controlled by ECCN 4798B listed below require a validated license to all countries except Australia, Austria, Belgium, Canada, Denmark, the Federal Republic of Germany, France, Greece, Iceland, Ireland, Italy, Japan, Luxemburg, the Netherlands, New Zealand, Norway, Portugal, Spain, Switzerland, Turkey and the United Kingdom.

- (1) [C.A.S. 756-79-6] Dimethyl methylphosphonate (DMMP)  
 Dimethoxymethyl phosphine oxide  
 Dimethyl methanephosphonate  
 Methanephosphonic acid dimethyl ester  
 Methylphosphonic acid dimethyl ester  
 (2) [C.A.S. 868-85-9] Dimethyl phosphite  
 Dimethoxyphosphine oxide  
 Dimethyl acid phosphite  
 Dimethyl hydrogen phosphite  
 Dimethyl phosphonate  
 Hydrogen dimethyl phosphite  
 Methyl phosphonate  
 (3) [C.A.S. 676-97-1] Methylphosphonyl dichloride  
 Dichloromethylphosphine oxide  
 Methanephosphonodichloridic acid  
 Methanephosphonyl chloride  
 Methylphosphonic acid dichloride  
 Methylphosphonic dichloride  
 Methylphosphonodichloridic acid  
 Methylphosphonyl chloride  
 (4) [C.A.S. 676-99-3] Methylphosphonyl difluoride  
 Difluoromethylphosphine oxide  
 Methyl difluorophosphite  
 Methylphosphonic difluoride  
 (5) [C.A.S. 10025-87-3] Phosphorus oxychloride  
 Phosphonyl trichloride  
 Phosphoric chloride  
 Phosphoric trichloride  
 Phosphoroxylchloride  
 Phosphoroxyltrichloride  
 Phosphorus chloride oxide  
 Phosphorus monoxide trichloride  
 Phosphorus oxide trichloride  
 Phosphorus oxytrichloride  
 Phosphorus trichloride oxide  
 Phosphoryl trichloride  
 Trichlorophosphine oxide

Trichlorophosphorus oxide  
 (6) [C.A.S. 7719-12-2] Phosphorus trichloride

Phosphorus chloride  
 Trichlorophosphine

(7) [C.A.S. 111-48-8] Thiodiglycol  
 Bis(2-hydroxyethyl) sulfide  
 Bis(2-hydroxyethyl) thioether  
 Di(2-hydroxyethyl) sulfide  
 Diethanol sulfide  
 2,2'-Dithiobis-(ethanol)  
 3-Thiapentane-1,5-diol  
 2,2'-Thiobisethanol  
 2,2'-Thiodiethanol  
 Thiodiethylene glycol  
 2,2'-Thiodiglycol

(8) [C.A.S. 7719-09-7] Thionyl chloride  
 Sulfinyl chloride  
 Sulfinyl dichloride  
 Sulfur chloride oxide  
 Sulfur oxychloride  
 Sulfurous dichloride  
 Sulfurous oxychloride  
 Thionyl dichloride

(9) [C.A.S. 121-45-9] Trimethyl phosphite  
 Phosphorus acid trimethyl ester  
 Trimethoxyphosphine

(b) The chemicals controlled by ECCN 5798F listed below require a validated license to Country Groups S and Z, Iran, Iraq, Syria, and to South Africa and Namibia if intended for delivery to or for use by or for military or police entities in these destinations, or for use in servicing equipment owned, controlled, or used by or for these entities.

- (1) [C.A.S. 1341-49-7] Ammonium hydrogen fluoride  
 Acid ammonium fluoride  
 Ammonium bifluoride  
 Ammonium difluoride  
 Ammonium hydrofluoride  
 Ammonium hydrogen bifluoride  
 Ammonium hydrogen difluoride  
 Ammonium monohydrogen difluoride  
 (2) [C.A.S. 7784-34-1] Arsenic trichloride  
 Arsenic (III) chloride  
 Arsenous chloride  
 Fuming liquid arsenic  
 Trichloroarsine  
 (3) [C.A.S. 76-93-7] Benzoic acid  
 .alpha.,.alpha.-Diphenyl-.alpha.-hydroxyacetic acid  
 Diphenylglycolic acid  
 .alpha.,.alpha.-Diphenylglycolic acid  
 Diphenylhydroxyacetic acid  
 .alpha.-Hydroxy-2,2-diphenylacetic acid  
 2-Hydroxy-2,2-diphenylacetic acid  
 .alpha.-Hydroxy-.alpha.-phenylbenzeneacetic acid  
 Hydroxydiphenylacetic acid  
 (4) [C.A.S. 107-07-3] 2-Chloroethanol  
 2-Chloro-1-ethanol  
 Chloroethanol  
 2-Chloroethyl alcohol  
 Ethene chlorohydrin

<sup>1</sup> Chemicals name previously used in Supplement No. 1 to § 799.1.



- Ethylchlorohydrin  
Ethylene chlorohydrin  
Ethylene chlorohydrin  
Glycol chlorohydrin  
Glycol monochlorohydrin  
2-Hydroxyethyl chloride  
(5) (C.A.S. 78-38-8) Diethyl ethylphosphonate  
Ethylphosphonic acid diethyl ester  
(6) (C.A.S. 15715-41-0) Diethyl methylphosphonite  
Diethoxymethylphosphine  
Diethyl methanephosphonite  
O,O-Diethyl methylphosphonite  
Methyldiethoxyphosphine  
Methylphosphonous acid diethyl ester  
(7) (C.A.S. 2404-03-7) Diethyl-N,N-dimethylphosphoramidate  
N,N-Dimethyl-O,O'-diethyl phosphoramidate  
Diethyl dimethylphosphoramidate  
Dimethylphosphoramidic acid diethyl ester  
(8) (C.A.S. 762-04-9) Diethyl phosphite  
Diethoxyphosphine oxide  
Diethyl acid phosphite  
Diethyl hydrogen phosphite  
Diethyl phosphonate  
Hydrogen diethyl phosphite  
(9) (C.A.S. 100-37-8) N,N-Diethylethanamine  
N,N-Diethyl-2-aminoethanol  
Diethyl (2-hydroxyethyl)amine  
N,N-Diethyl-N-(beta.-hydroxyethyl)amine  
N,N-Diethyl-2-hydroxyethylamine  
Diethylaminoethanol  
2-(Diethylamino) ethanol  
2-(Diethylamino) ethyl alcohol  
N,N-Diethylmonoethanolamine  
(2-Hydroxyethyl)diethylamine  
N-(2-Hydroxyethyl)diethylamine  
2-Hydroxytriethylamine  
(10) (C.A.S. 5842-07-9) N,N-Diisopropyl-beta.-aminoethanethiol  
2-(Diisopropylamino) ethanethiol  
Diisopropylaminoethanethiol  
beta.-Diisopropylaminoethanethiol  
2-(bis(1-Methylethyl)amino) ethanethiol  
(11) (C.A.S. 96-80-0) N,N-Diisopropyl-beta.-aminoethanol  
N,N-Diisopropyl-2-aminoethanol  
2-(Diisopropylamino) ethanol  
(N,N-Diisopropylamino) ethanol  
2-(Diisopropylamino) ethyl alcohol  
N,N-Diisopropylethanamine  
(12) (C.A.S. 96-79-7) N,N-Diisopropyl-beta.-aminoethyl chloride  
2-Chloro-N,N-diisopropylethanamine  
1-Chloro-2-diisopropylaminoethane  
2-Chloro-N,N-diisopropylethylamine  
N-(2-chloroethyl)-N-(1-methylethyl)-2-propanamine  
N-(2-Chloroethyl)diisopropylamine  
N,N-Diisopropyl-2-chloroethylamine  
1-(Diisopropylamino)-2-chloroethane  
2-(Diisopropylamino)ethyl chloride  
Diisopropylaminoethyl chloride  
beta.-Diisopropylaminoethyl chloride  
(13) (C.A.S. 108-13-9) Diisopropylamine  
N,N-Diisopropylamine  
N-(1-Methylethyl)-2-propanamine  
(14) (C.A.S. 6163-75-3) Dimethyl ethylphosphonate  
Dimethyl ethanephosphonate  
Ethylphosphonic acid dimethyl ester  
(15) (C.A.S. 124-40-3) Dimethylamine  
N-Methyl methanamine  
(16) (C.A.S. 506-59-2) Dimethylamine hydrochloride  
Dimethylammonium chloride  
N-Methyl methanamine hydrochloride  
(17) (C.A.S. 57856-11-8) O-Ethyl-2-diisopropylaminoethyl methylphosphonite (QL)  
Methylphosphonous acid 2-(bis(1-methylethyl)amino)ethyl ester  
(18) (C.A.S. 1498-40-4) Ethylphosphonous dichloride  
Dichloroethylphosphine  
Ethyl phosphonous dichloride  
Ethyl dichlorophosphine  
(19) (C.A.S. 430-78-4) Ethylphosphonous difluoride  
Ethyl difluorophosphine  
(20) (C.A.S. 1066-50-8) Ethylphosphonyl dichloride  
Dichloroethylphosphine oxide  
Ethanephosphonyl chloride  
Ethylphosphinic dichloride  
Ethylphosphonic acid dichloride  
Ethylphosphonic dichloride  
(21) (C.A.S. 753-98-0) Ethylphosphonyl difluoride  
Ethyl difluorophosphite  
Ethyl difluorophosphine oxide  
Ethylphosphonic difluoride  
(22) (C.A.S. 7664-39-3) Hydrogen fluoride  
Anhydrous hydrofluoric acid  
Fluorhydric acid  
Fluorine monohydride  
Hydrofluoric acid gas  
(23) (C.A.S. 3554-74-3) 3-Hydroxy-1-methylpiperidine  
3-Hydroxy-N-methylpiperidine  
1-Methyl-3-hydroxypiperidine  
N-Methyl-3-hydroxypiperidine  
1-Methyl-3-piperidinol  
N-Methyl-3-piperidinol  
(24) (C.A.S. 76-89-1) Methyl benzilate  
Benzilic acid methyl ester  
alpha.-Hydroxy-alpha.-phenylbenzeneacetic acid methyl ester  
Methyl alpha.-phenylmandelate  
Methyl diphenylglycolate  
(25) (C.A.S. 678-83-5)  
Methylphosphonous dichloride  
Dichloromethylphosphine  
Methyldichlorophosphine  
Methylphosphorus dichloride  
(26) (C.A.S. 753-59-3)  
Methylphosphonous difluoride  
Difluoromethylphosphine  
Methyldifluorophosphine  
(27) (C.A.S. 10026-13-8) Phosphorus pentachloride  
Pentachlorophosphorane  
Pentachlorophosphorus  
Phosphoric chloride  
Phosphorus(V) chloride  
Phosphorus perchloride  
(28) (C.A.S. 1314-80-3) Phosphorus pentasulfide  
Diphosphorus pentasulfide  
Phosphoric sulfide  
Phosphorus persulfide  
Phosphorus sulfide  
(29) (C.A.S. 75-97-8) Pinacolone  
tert-Butyl methyl ketone  
2,2-Dimethyl-3-butanone  
3,3-Dimethyl-2-butanone  
2,2-Dimethylbutanone  
3,3-Dimethylbutanone  
1,1-Dimethylethyl methyl ketone  
Methyl tert-butyl ketone  
Pinacolin  
Pinacoline  
1,1,1-Trimethylacetone  
(30) (C.A.S. 464-07-3) Pinacolyl alcohol  
tert-Butyl methyl carbinol  
2,2-Dimethyl-3-butanol  
3,3-Dimethyl-2-butanol  
1-Methyl-2,2-dimethylpropanol  
(31) (C.A.S. 151-50-8) Potassium cyanide  
(32) (C.A.S. 7789-23-3) Potassium fluoride  
Potassium monofluoride  
(33) (C.A.S. 7789-29-9) Potassium hydrogen fluoride  
Hydrogen potassium difluoride  
Hydrogen potassium fluoride  
Potassium acid fluoride  
Potassium bifluoride  
Potassium hydrogen difluoride  
Potassium monohydrogen difluoride  
(34) (C.A.S. 1819-34-7) 3-Quinuclidinol  
1-Azabicyclo(2.2.2)octan-3-ol  
3-Hydroxyquinuclidine  
(35) (C.A.S. 3731-38-2) 3-Quinuclidone  
1-Azabicyclo(2.2.2)octan-3-one  
3-Oxyquinuclidine  
Quinuclidone  
(36) (C.A.S. 1333-83-1) Sodium bifluoride  
Sodium hydrogen difluoride  
Sodium hydrogen fluoride  
Thiophosphoric anhydride  
(37) (C.A.S. 143-33-9) Sodium cyanide  
(38) (C.A.S. 7681-49-4) Sodium fluoride  
Sodium monofluoride  
(39) (C.A.S. 1313-82-2) Sodium sulfide  
Disodium monosulfide  
Disodium sulfide  
Sodium monosulfide  
Sodium sulphide  
(40) (C.A.S. 102-71-6) Triethanolamine  
Alkanolamine 244  
Nitrilotriethanol  
2,2',2''-Nitrilotriethanol  
2,2',2''-Nitrilotris(ethanol)  
TEA  
TEA(amino alcohol)  
Tri(2-hydroxyethyl)amine  
Triethanolamin



Tris(beta-hydroxyethyl)amine  
Tris(2-hydroxyethyl)amine  
Trolamine

(41) (C.A.S. 122-52-1) Triethyl phosphite  
Phosphorous acid triethyl ester  
Triethoxyphosphine  
Tris(ethoxy)phosphine

James M. LeMunyon,

Deputy Assistant Secretary for Export  
Administration.

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## FEDERAL TRADE COMMISSION

### 16 CFR Part 305

RIN 3084-AA26

#### Rules for Using Energy Cost and Consumption Information Used in Labeling and Advertising of Consumer Appliances Under the Energy Policy and Conservation Act; Ranges of Comparability for Furnaces.

**AGENCY:** Federal Trade Commission.

**ACTION:** Final rule.

**SUMMARY:** The Federal Trade Commission announces new ranges of comparability for oil and gas furnaces and boilers based on the revised test procedures published by the Department of Energy (DOE) on February 7, 1989.<sup>1</sup> Ranges of comparability for electric furnaces and boilers, which are not affected by the test revision, will remain unchanged.

**EFFECTIVE DATE:** March 20, 1990.

**FOR FURTHER INFORMATION CONTACT:** James Mills, Attorney, 202-328-3035, Division of Enforcement, Federal Trade Commission, Washington, DC 20580.

**SUPPLEMENTARY INFORMATION:** Section 324 of the Energy Policy and Conservation Act of 1975 (EPCA)<sup>2</sup> requires the Federal Trade Commission to consider labeling rules for the disclosure of estimated annual cost of operation or alternative energy consumption information for at least thirteen categories of appliances. Furnaces are included as one of the categories. Before these labeling requirements may be prescribed, the statute requires the Department of Energy ("DOE") to develop test procedures that measure how much energy the appliances use. In addition, DOE is required to determine the representative average cost a consumer pays for the different types of energy available.

On November 19, 1979, the Commission issued a final rule<sup>3</sup> covering seven of the thirteen appliance categories, including furnaces. The rule requires that energy efficiency, cost of operation and related information be disclosed on fact sheets and in retail sales catalogs for all furnaces presently manufactured. Certain point-of-sale promotional materials must disclose the availability of energy usage information. If a furnace is advertised in a catalog from which it may be purchased by cash, charge account or credit terms, then certain efficiency information concerning the product must be included on each page of the catalog that lists the product. The required disclosures and all claims concerning energy consumption made in writing or in broadcast advertisements must be based on the results of the DOE test procedures.

The rule requires that each fact sheet show a range, or scale, indicating the range of energy efficiencies for all furnace models of a size or capacity comparable to the model to which the fact sheet pertains. These ranges show the highest and lowest energy efficiencies for the various size or capacity groupings of furnaces covered by the rule.

Under § 305.10(a) of the rule, the Commission is empowered to publish new ranges annually in the *Federal Register*, if appropriate. The rule specifies that it is appropriate to publish new ranges whenever the upper or lower limits of the range change by 15% or more from the previously published ranges. Otherwise, the Commission must publish a statement that the prior ranges remain in effect until new ranges are published.<sup>4</sup> However, in other circumstances publication of new ranges also may be applicable.

Today, the Commission is publishing new ranges because DOE has changed part of its test procedure for furnaces and boilers. As a result of this change, the energy efficiency measure (the annual fuel utilization efficiency) for many oil- and gas-fueled furnaces is slightly lower when tested under the revised procedure. With the assistance of the Gas Appliance Manufacturers Association, the Commission's staff has determined that, in most cases, the ranges for these products have been changed because of these new test

results.<sup>5</sup> Although these limits have generally changed by less than 15%, the Commission believes that these new ranges, which more accurately reflect the efficiencies of products in the marketplace, should be published. By publishing new ranges, the Commission can ensure that the efficiency ranges, as well as the other required efficiency disclosures appearing in the marketplace that must be based on the DOE procedure, will be derived from the same test procedure.

In consideration of the foregoing, the Commission herewith publishes new ranges for gas-fueled and oil-fueled furnaces and boilers. Since the revisions to the DOE test procedure do not affect that part of the test pertaining to electric furnaces and boilers, the ranges for those products remain unchanged.

#### List of Subjects in 16 CFR Part 305

Advertising, Energy conservation, Household appliances, Labeling, Reporting and recordkeeping requirements.

Accordingly, 16 CFR part 305 is amended as follows:

#### PART 305—[AMENDED]

1. The authority citation for part 305 continues to read as follows:

**Authority:** Sec. 324 of the Energy Policy and Conservation Act (Pub. L. 94-163) (1975), as amended by the National Energy Conservation Policy Act, (Pub. L. 95-619) (1978), the National Appliance Energy Conservation Act, (Pub. L. 100-12) (1987), and the National Appliance Energy Conservation Amendments of 1988, (Pub. L. 100-357) (1988), 42 U.S.C. 6294; sec. 553 of the Administrative Procedure Act, 5 U.S.C. 553.

#### Appendices G1 and G3 to Part 305 [Amended]

2. Appendix G1 is revised to read as follows:

##### 1. Range Information:

##### APPENDIX G1—FURNACES—GAS

Comparability (BTU per hour)	Ranges of energy efficiency ratings	
	Low	High
5,000 to 10,000.....	(1)	(1)
11,000 to 16,000.....	(1)	(1)
17,000 to 25,000.....	66.4	73.7
26,000 to 42,000.....	58.8	96.6
43,000 to 59,000.....	58.2	95.0
60,000 to 76,000.....	58.1	94.9
77,000 to 93,000.....	59.3	94.0
94,000 to 110,000.....	60.0	94.0
111,000 to 127,000.....	63.0	92.6
128,000 to 144,000.....	61.9	92.6

<sup>3</sup> 44 FR 66486, 16 CFR part 305 (Nov. 19, 1979).

<sup>4</sup> In the case of furnaces, the Commission has never found it necessary to change the original ranges that were published on March 25 and April 17, 1989 (45 FR 19520 and 28036).

<sup>1</sup> 54 FR 6062. The DOE test procedures went into effect on September 5, 1989.

<sup>2</sup> Pub. L. 94-163, 89 Stat. 871 (Dec. 22, 1975).

<sup>5</sup> Some of the upper and/or lower limits of the ranges for these products have increased, however, for reasons unrelated to the new test procedure.



APPENDIX G1—FURNACES—GAS—  
Continued

Comparability (BTU per hour)	Ranges of energy efficiency ratings	
	Low	High
145,000 to 161,000.....	62.2	92.6
162,000 to 178,000.....	(1)	(1)
179,000 to 195,000.....	(1)	(1)
196,000 and over.....	(1)	(1)

(1) No data submitted.

3. Appendix G3 is revised to read as follows:

## APPENDIX G3—FURNACES—OIL

Comparability (BTU per hour)	Ranges of energy efficiency ratings	
	Low	High
5,000 to 10,000.....	(1)	(1)
11,000 to 16,000.....	(1)	(1)
17,000 to 25,000.....	(1)	(1)
26,000 to 42,000.....	(1)	(1)
43,000 to 59,000.....	78.3	86.7
60,000 to 76,000.....	75.0	88.9
77,000 to 93,000.....	67.9	89.1
94,000 to 110,000.....	73.5	86.0
111,000 to 127,000.....	72.7	86.7
128,000 to 144,000.....	73.3	83.7
145,000 to 161,000.....	65.5	86.0
162,000 to 178,000.....	74.3	82.7
179,000 to 195,000.....	78.0	81.4
196,000 and over.....	(1)	(1)

(1) No data submitted.

Donald S. Clark,  
Secretary.

[FR Doc. 89-29575 Filed 12-19-89; 8:45 am]

BILLING CODE 6750-01-M

## DEPARTMENT OF LABOR

## Employment Standards Administration

## 20 CFR Part 10

## RIN 1215-AA50

Compensation Payable Under the  
Federal Employees' Compensation  
Act, as Amended

AGENCY: Employment Standards  
Administration, Labor.

ACTION: Final rule.

**SUMMARY:** The Department of Labor is making a technical change to the regulations implementing the Federal Employees' Compensation Act (FECA), 5 U.S.C. 8101, *et seq.* The change reflects recent legislation (Pub. Law 100-586) amending section 8112 of the FECA to exempt from the provision establishing a maximum amount of monthly compensation payable, certain individuals injured during an assassination attempt against specified

government officials. Because the change merely incorporates the new statutory language the rule is published as a final rule, effective immediately.

EFFECTIVE DATE: December 20, 1989.

**FOR FURTHER INFORMATION CONTACT:** Thomas M. Markey, Director for Federal Employees' Compensation, Employment Standards Administration, U.S. Department of Labor, 200 Constitution Avenue, NW., Room S-3229, Washington, DC, 20010; Telephone: (202) 523-7552.

**SUPPLEMENTARY INFORMATION:** Section 5 of Public Law 100-566 (approved October 31, 1988, Public Law 100-566, 102 Stat. 2834) amended section 8112 of the Federal Employees' Compensation Act, which establishes maximum (and minimum) monthly compensation payments. The amendment removes the ceiling (75% of the maximum rate of basic pay for GS-15) on the amount of disability compensation payable for "any employee whose disability is a result of an assault which occurs during an assassination or attempted assassination of a Federal official described under section 351(a) or 1751(a) of title 18, and was sustained in the performance of duty."

Section 351 of title 18 of the United States Code refers to Members of Congress, a Cabinet officer or the second ranking official in such a department, the Director or Deputy Director of the Central Intelligence Agency, a major Presidential or Vice Presidential candidate, or a Justice of the United States, including nominees for these positions as defined. Section 1751 of 18 U.S.C., refers to the President, President-elect, Vice President (or if none then the officer next in order of succession) or Vice President-elect, or certain persons employed in the Executive Office of the President or Vice President.

The final rule changes the regulation dealing with compensation rates to conform with the amendment to the Act. This would ensure that the provisions of the law are accurately reflected in the implementing regulations.

Publication in final: The Department of Labor has determined, pursuant to 5 U.S.C. 553(b)(3), that good cause exists for waiving public comment on this amendment to the regulations because the change is mandated by law and involves no interpretation.

The Department has determined that good cause exists for waiving the customary requirement for delay in the effective date of a final rule for 30 days following its publication. Therefore this amendment shall be effective immediately. See 5 U.S.C. 553(d)(3). This

finding is made because the change is mandated by a statutory change and involves no discretionary action.

## Classification—Executive Order 12291

The Department of Labor does not believe that this regulatory proposal constitutes a "major rule" under Executive Order 12291, as it will not result in: (1) an annual effect on the economy of \$100 million or more; (2) a major increase in cost or prices for consumers, individual industries, federal, state or local government agencies, or geographic regions; or (3) significant adverse effects on competition, employment, investment, productivity, innovation or the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets. Accordingly, no regulatory analysis is required.

## Paperwork Reduction Act

The information collection requirements entailed by the rule will not differ from those currently in effect. No new forms are required.

## Regulatory Flexibility Act

The Department believes that the rule will have "no significant economic impact upon a substantial number of small entities" within the meaning of section 3(a) of the Regulatory Flexibility Act, Public Law 96-354, 91 Stat. 1164 (5 U.S.C. 605(c)). The regulation applies solely to benefits administered by the Department of Labor and paid to individual claimants who are or were federal employees or their survivors; no additional burdens are being imposed on small entities. The Secretary of Labor has certified to the Chief Counsel for Advocacy of the Small Business Administration to this effect. Accordingly, no regulatory impact analysis is required.

## List of Subjects in 20 CFR Part 10

Claims, Government employees, Archives and records, Health records, Freedom of Information, Privacy, Penalties, Health professions, Workers' Compensation, Employment, Administrative practice and procedure, Wages, Health facilities, Dental health, Medical devices, Health care, Lawyers, Legal services, Student, X-rays, Labor, Insurance, Kidney disease, Lung disease, Tort claim.

For the reasons set out in the preamble, title 20, chapter I, subpart C of the Code of Federal Regulations is amended as follows:

1. The authority citation for 20 CFR part 10 is revised to read as follows:



Authority: 5 U.S.C. 301; Reorganization Plan No. 6 of 1950, 15 FR 3174, 64 Stat. 1293; 5 U.S.C. 8145, 8149; Secretary's Order 7-87, 52 FR 48460; Employment Standards Order 78-1, 43 FR 51469.

2. Section 10.300 is amended by revising paragraph (a) and adding a new paragraph (c) to read as follows:

**§ 10.300 Maximum and minimum compensation.**

(a) *Disability.* Compensation for disability may not exceed 75 percent of the monthly pay of the highest step of grade 15 of the General Schedule, except insofar as provided in paragraph (c) below. For total disability, it may not be less than 75 percent of the monthly pay of the first step of grade 2 of the General Schedule or actual pay, whichever is less.

(c) *Exclusion from maximum compensation rate.* The provisions in paragraph (a) above concerning the maximum rate of compensation do not apply to any employee whose disability is a result of an assault which occurs during an assassination or attempted assassination of a Federal official described under section 351(a) or 1751(a) of title 18, and was sustained in the performance of duty.

Signed at Washington, DC, this 13th day of December, 1989.

Lawrence W. Rogers,

Director, Office of Workers' Compensation Programs.

[FR Doc. 89-29458 Filed 12-15-89; 8:45 am]

BILLING CODE 4510-27-M

**Occupational Safety and Health Administration**

**29 CFR Parts 1910 and 1926**

[Docket No. H-033]

**Occupational Exposure to Asbestos, Tremolite, Anthophyllite and Actinolite**

**AGENCY:** Occupational Safety and Health Administration, Labor.

**ACTION:** Final rule; partial response to court remand.

**SUMMARY:** On June 20, 1986, at 51 FR 22612, OSHA published revised standards governing occupational exposure to asbestos in general industry (29 CFR 1910.1001) and construction (29 CFR 1926.56). OSHA reduced the 8-hour time weighted average permissible exposure limit to 0.2 f/cc, and adopted provisions for medical surveillance, exposure monitoring, methods of compliance, respirators and record keeping, among others.

On February 2, 1988, the U.S. Court of Appeals for the District of Columbia Circuit upheld the standard in most respects but remanded the case to OSHA on several issues. *Building and Construction Trades Department v. Brock*, 838 F. 2d 1258 (D.C. Cir. 1988). In partial response to the decision, on September 14, 1988, OSHA issued a short term exposure limit (STEL) for asbestos of 1 f/cc averaged over a sampling period of 30 minutes (53 FR 35610).

In June and July 1989, the Building and Construction Trades Department of the AFL-CIO (BCTD) and the AFL-CIO petitioned the Court to order OSHA to resolve all remand issues on the record of the 1986 rulemaking proceeding. The Court, on October 30, 1989, ordered OSHA to take action on three of the remand issues by December 14, 1989 (Category I), and the remaining issues by January and February 1990.

This document constitutes OSHA's response on the first three remand issues. OSHA is (1) removing the ban on the spraying of asbestos-containing materials; (2) changing the regulatory text to clarify when construction employers must resume periodic monitoring; and (3) explaining why OSHA is not amending the regulatory text at this time to clarify the limited exemption for "small-scale, short-duration operations" in the construction industry standard.

OSHA intends to publish a notice of its resolution of Category II remand issues by January 28, 1990, and a notice of proposed rulemaking for Category III remand issues by February 27, 1990.

**EFFECTIVE DATE:** Amendments to the standard will become effective January 19, 1990.

**FOR FURTHER INFORMATION CONTACT:** Mr. James Foster, OSHA, U.S. Department of Labor, Office of Public Affairs, room N3647, 200 Constitution Avenue NW., Washington, DC 20210. Telephone (202) 523-8151.

**SUPPLEMENTARY INFORMATION:**

**I. Clearance of Information Collection Requirements**

On March 31, 1983, the Office of Management and Budget (OMB) published 5 CFR part 1320, implementing the information collection provisions of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 et seq. (48 FR 13666). Part 1320, which became effective on April 30, 1983 and was revised May 10, 1988 (53 FR 16618), sets forth procedures for agencies to follow in obtaining OMB clearance for information collection requirements. OSHA does not believe that the resolution of these remand

issues results in any change to the information collection burden which would require OMB paperwork clearance. OMB has approved information collection requests for the existing asbestos standards in accordance with the provisions of the Paperwork Reduction Act under control numbers 1218-0133 and 1218-0134. The changes herein impose no new or additional information collection burdens.

**II. Background**

On June 17, 1986, OSHA issued revised standards governing occupational exposure to asbestos, tremolite, anthophyllite and actinolite for general industry and construction (51 FR 22612 et seq., June 20, 1986). Effective July 21, 1986, the revised standards amended OSHA's previous asbestos standard issued in 1972. (On October 17, 1986, OSHA published a partial stay of the revised standards insofar as they apply to occupational exposure to non-asbestiform tremolite, anthophyllite and actinolite (51 FR 37002). The stay has been extended to November 30, 1990 (see 54 FR 30704), to enable OSHA to complete rulemaking on these non-asbestiform minerals. The partial stay continues to apply to the 1986 standards and all amendments thereto, including the amendments in this notice.)

Separate comprehensive standards for general industry and construction were issued which shared the same PEL and most ancillary requirements. The standards reduced the TWA permissible exposure limit tenfold to 0.2 f/cc from the previous 2 f/cc limit. Specific provisions were added in the construction standard to cover unique hazards relating to asbestos abatement and demolition jobs.

Several major participants in the rulemaking proceeding including the AFL-CIO, the Building and Construction Trades Department ("BCTD"), and the Asbestos Information Association ("AIA"), challenged various provisions of the revised standards. On February 2, 1988, the U.S. Court of Appeals for the District of Columbia Circuit issued its decision upholding most major challenged provisions, but remanding certain issues to OSHA for reconsideration (*BCTD, AFL-CIO v. Brock*, 838 F. 2d 1258). The Court held that where rulemaking participants had recommended regulatory provisions which, on the record, appeared to be feasible and to confer more than a *de minimis* benefit in reducing significant risk, OSHA must either adopt them, refute the evidence of feasibility or benefit, or more persuasively explain



why OSHA did not adopt the provisions. The Court also ordered OSHA to clarify the regulatory text for two provisions and found one provision, a ban on spraying asbestos-containing products, unsupported by the record. In addition, OSHA's failure to adopt a STEL was ordered to be reconsidered within 60 days of the Court's mandate. In partial response, OSHA issued a STEL, called an "excursion limit," of 1 f/cc measured over 30 minutes, on September 14, 1988 (53 FR 35610).

On June 10 and July 18, 1989, BCTD and the AFL-CIO petitioned the Court to enforce its remand order by ordering OSHA to resolve all remand issues on the record of the 1988 rulemaking proceeding within 7 to 60 days. The Court, in an October 30, 1989 order, divided the remand issues into three categories as follows.

With respect to three issues, the Court ordered OSHA to take action by December 14, 1989. These issues are:

- (1) Formally delete the ban on the spraying of asbestos-containing materials;
- (2) Clarify that periodic monitoring in the construction industry must be resumed after conditions change; and
- (3) Clarify the exemption for "small-scale, short-duration operations" from the negative-pressure enclosure requirements of the construction standard to limit the exemption to work operations where it is impractical to construct an enclosure because of the configuration of the work environment.

On these issues, the Court told OSHA that if it determines not to make any of the regulatory changes, it should explain its inaction in a written statement. In addition, the Court noted that OSHA may propose new rules after making the changes in the standard.

With respect to the second group of issues, the Court ordered OSHA to complete its response on the existing record by January 28, 1990. These issues are:

- (4) The possibility of further regulations governing employee smoking controls;
- (5) The effectiveness levels of various respirators and OSHA's policy of requiring respirators to protect workers at only the PEL level; and
- (6) The possibility of bilingual warnings and labels for employers with a significant number of non-English-speaking employees.

The Court stated that if OSHA determines that these issues could not be resolved on the existing record, OSHA may explain why and commence new rulemaking instead.

Finally, as to the three remaining remand issues, the Court allowed OSHA

to publish rulemaking proposals no later than February 27, 1990, but invited OSHA to attempt to resolve these issues on the existing record if possible. These issues are:

- (7) The establishment of operation-specific permissible exposure limits;
- (8) The extension of reporting and transfer requirements;
- (9) The expansion of the competent person requirement to all employers engaged in any kind of construction work.

This document constitutes OSHA's response to the first three issues. OSHA is deleting the previously imposed ban on the spraying of asbestos-containing materials (29 CFR 1910.1001(f)(1)(vii), 1926.58(g)(2)(iii)); amending the regulatory text of section 1926.58(f)(4) to clarify its intent to require construction employees to resume monitoring when conditions change; and explaining that it has determined not to amend the exemption from the negative pressure enclosure requirements. OSHA will institute rulemaking on this latter issue as part of the rulemaking proceeding to be instituted in response to the Court's order concerning issues 7, 8 and 9.

On these first three issues, because OSHA is merely adding regulatory text to clarify its previously expressed intent and deleting a provision which the Court of Appeals has ruled is invalid, the Agency concludes that advance notice and opportunity for comment are impractical and unnecessary in accordance with the intent of 5 U.S.C. 553(b).

OSHA will reconsider the other issues remanded by the Court pursuant to the terms of the October 30 court order. A notice will be published by January 28, 1990 in the Federal Register detailing the Agency's resolution of Issues 4, 5, and 6 based on the existing record. OSHA will further publish a notice of proposed rulemaking on issues 7, 8 and 9, and issue 3, by February 27, 1990.

### III. Summary and Explanation of the Remand Issues

#### 1. OSHA's Ban on the Spraying of Asbestos Products

In its 1986 standard, OSHA banned the application of asbestos-containing products through spray techniques. (29 CFR § 1910.1001(f)(1)(vii), 1926.58(g)(2)(iii)). The Court of Appeals reviewed OSHA's findings and concluded that: "The support for the ban plainly fails to meet the 'substantial evidence' standard imposed by section 6(f) of the Act\* \* \*. The ban cannot stand." OSHA, therefore, is amending the regulatory text of the final asbestos standard by deleting the prohibition

regarding the spray application of asbestos-containing products.

Based on the record of the 1986 standard, OSHA believes that deleting this prohibition will not significantly increase the risk to employees. Many asbestos-containing products have been banned by EPA, and the remaining ones are formulated by encapsulating any asbestos content which limits releases to undetectable amounts. In addition, the OSHA PEL and excursion limit apply to all asbestos operations, including spraying. Thus, the ban would not have significantly reduced the risk to employees who may be present during the spraying of asbestos-containing products.

#### 2. Resumption of Monitoring in the Construction Industry

The Court ordered OSHA to add to the construction standard the resumption of monitoring requirement found in the general industry standard. In its 1988 decision the Court stated that:

The regulations allow a construction industry employer to terminate periodic monitoring if the results of monitoring demonstrate that exposures are below the action level, 29 CFR § 1926.58(f)(4). Unlike the equivalent provision for general industry, however, the construction industry standard includes no requirement for the resumption of monitoring when a change in workplace conditions may result in exposures above the action level. Compare 29 CFR § 1910.1001(d)(5). OSHA replies only that this sort of resumption requirement is implicit in the current standard. OSHA Brief at 90. In view of the risk that an employer might infer the opposite from the contrast in language, we believe OSHA should clarify the regulation to conform to the intent expressed in its brief. (838 F. 2d at 1276).

Therefore, OSHA is renumbering the current paragraph (f)(4). Termination of monitoring, as paragraph (f)(4)(i), and is adding the following provision to the regulatory text to clarify its previously expressed intent:

§ 1926.58(f)(4)(ii). *Additional monitoring.* Notwithstanding the provisions of paragraph (f)(4)(i) of this section, the employer shall institute the exposure monitoring required under paragraph (f)(3) of this section whenever there has been a change in process, control equipment, personnel or work practices that may result in new or additional exposures above the action level and/or excursion limit or when the employer has any reason to suspect that a change may result in new or additional exposures above the action level and/or excursion limit. Exception: When all employees within a regulated area are equipped with supplied-air respirators operated in the positive-pressure mode, the employer may dispense with the monitoring required by this paragraph.



OSHA believes that requiring monitoring to be resumed when changed conditions indicate increased exposure ensures that workplace exposures are accurately assessed. This provision is included in the general industry asbestos standard and in all other substance-specific standards with monitoring requirements. OSHA did not intend to exclude this provision from the construction standard. Especially in construction, where work processes change often, allowing monitoring to be terminated based on the results of one monitoring event showing exposures below the action level and excursion limit would defeat an exposure monitoring scheme and would have been outside OSHA's original intent. This change clarifies that intent.

For purposes of clarity, OSHA is including in the requirement for additional monitoring the same exemption which currently applies to the periodic monitoring requirement. This exempts employers from resuming daily monitoring if all the employees in the regulated area are equipped with supplied-air respirators operated in the positive-pressure mode. OSHA found that such respirator use, the most protective available, was sufficiently protective, so that daily monitoring was not necessary. Additionally, OSHA found that the costs of daily monitoring were sufficiently high, so that exempting employers from that obligation conditioned on providing the most protective respirators would be an effective incentive to providing that degree of respiratory protection. The exemption logically applies equally to the additional monitoring required by paragraph (f)(4)(ii), and has therefore been included.

### 3. Clarifying the Exemption for "Small-Scale, Short-Duration Operations"

Paragraph (e)(6) of the construction standard requires the employer to establish negative-pressure enclosures wherever feasible, and to designate "competent persons," before commencing asbestos removal, demolition and renovation operations. Paragraph (e)(6)(iv) contains an exception to these requirements for small-scale, short-duration operations. The standard gives as examples such operations as pipe repair, valve replacement, installing electrical conduits, installing or removing drywall, roofing, and other general building maintenance or renovation activities, but does not explicitly define "small-scale, short-duration operations."

In the February 1988 decision, the Court found that the scope of the exception was so unclear that "the

exception as now worded seems to erase the rule." (838 F. 2d at 1279). The Court ordered the Agency to clarify the exception by limiting it to operations where it is impractical to construct a negative pressure enclosure because of the configuration of the work environment, and thereby to conform the exemption to OSHA's original representations as to its meaning. (See 838 F. 2d at 1279-80; and Court Order dated October 30, 1989.)

As noted above, the Court further ordered on October 30 that "(i)f OSHA finally determines not to make \* \* \* [this] regulatory change, it shall explain its inaction in a written statement, copies of which it shall send to this court and to the parties." OSHA has determined not to change the regulatory text concerning small-scale, short-duration operations at this time and instead to institute rulemaking on this issue. The reasons for this determination are as follows.

First, the agency believes, based on its experience in enforcing the construction standard, that explicitly limiting the exemption to situations where negative pressure enclosures are impractical might not reduce employee risk from asbestos exposure.

The negative pressure enclosures contemplated by the 1986 standard are area enclosures in which abatement and renovation employee work. The enclosures are required to be placed under negative pressure (a partial vacuum) so that asbestos fibers remain inside even if a leak develops in the enclosure shell. OSHA believes that negative pressure enclosures reduce employee risk primarily by reducing leakage and containing the asbestos material being disturbed. Thus areas outside the work area are not contaminated and bystander employees are protected from exposure. However, the record of the 1986 standard contains no data concerning whether employees working within the negative pressure enclosures also benefit from reduced exposure, whether working inside enclosures may increase exposures, and whether enclosures may introduce other potential work hazards such as heat stress. Further rulemaking is necessary to develop this information.

OSHA believes, therefore, that modifying the exemption in the standard to apply only where the erection of enclosures is impractical would result in the use of such enclosures in operations where they would not necessarily enhance worker protection. It would mean that virtually all removal and renovation jobs, regardless of the amount of asbestos being disturbed, the

effectiveness of worker isolation techniques such as glove bags, and the incidental nature of the removal, would have to be performed within enclosures. As noted above, the earlier record does not compel the use of negative pressure enclosures in all cases where they are practical, because the record does not address all pertinent questions about the effects on employees in such enclosures. OSHA believes that employees disturbing only small amounts of asbestos, protected by the controls in appendix G, may not additionally benefit from negative pressure enclosures and thus may not be at increased risk as a result of their absence. Similarly, bystander employees do not always need the protection provided by walk-in enclosures, where glove bags contain fibers released and the amount of asbestos being disturbed is small. OSHA therefore concludes that an expanded negative pressure enclosure requirement is not necessary to protect employees in these restricted situations at this time.

Second, OSHA does not believe that an immediate regulatory limitation on the exception's scope is needed, because the Agency is now enforcing, through interpretation, restrictions of the exception which meet the court's concerns about its potential overbreadth. Until supplementary rulemaking is completed, OSHA needs the flexibility provided by a compliance policy which can accommodate its growing knowledge about asbestos abatement technology. OSHA's instruction to the field (CPL 2-2.40), issued on September 1, 1987, and letters of interpretation, indicate that for the exemption to apply the operation must meet all of the following criteria: (1) The removal of asbestos-containing materials is not the primary goal of the job; (2) employees' exposures to asbestos can be kept below the action level via worker isolation techniques, such as glove bags or other methods described in appendix G; (3) the operation must be included in the employer's asbestos "maintenance program" (as required in appendix G); (4) the operation must be nonrepetitive (i.e., not a series of small-scale jobs, which if performed at one time would have resulted in large-scale removal). Where negative pressure enclosures are practical and effective, their use is required.

OSHA believes, therefore, that its current enforcement policy effectively limits exemptions from negative pressure enclosures to situations where there is little chance of bystander



exposure or of significant asbestos release during renovation and removal.

Third, OSHA has received numerous suggestions on how to clarify or amend the definition of small-scale, short-term operations. The agency also is collecting information on experience with negative pressure enclosures and on alternatives which may provide the same degree of protection to employees removing asbestos and to bystander employees. OSHA believes that additional rulemaking is required to compile and assess information on the risk reduction for employees working in negative pressure enclosures.

An interim expansion of the negative pressure enclosure requirement, consistent with the court order, would be confusing in light of possible regulatory approaches in the subsequent rulemaking. In the supplemental rulemaking, OSHA intends to discuss the effectiveness and drawbacks of negative pressure enclosures, glove bags, and alternative control systems; and to specify more clearly under what circumstances various control systems may be used. OSHA will consider allowing new technology unavailable in 1986, such as negative pressure glove bags, which appear to offer improved employee protection in certain circumstances. Thus OSHA's approach in the rulemaking may limit, rather than expand, the walk-in enclosure requirement. After the rulemaking, OSHA intends, if the record permits, to amend the regulatory text and appendices to cover new and future control systems. An interim amendment imposing an expanded negative-pressure enclosure requirement may confuse the public, since the Agency would be taking inconsistent positions concerning the need for these enclosures. Such an interim "clarification" may further contribute to any public uncertainty about the scope of the negative pressure enclosure exemption.

OSHA intends to publish the proposal on this issue by February 27, 1990, along with the remaining three issues for which rulemaking was ordered. OSHA notes that the related issue of the scope of the competent person requirement was included among those issues. The interplay between the negative pressure enclosure and competent person issues (for example, one of the responsibilities of the competent person is to set up the negative pressure enclosure) also supports their combined consideration in the rulemaking scheduled to begin in February.

#### IV. State Plan Applicability

Twenty-five states and U.S. territories have their own OSHA-approved occupational safety and health plans. These states and territories are: Alaska, Arizona, California, Connecticut (for state and local government employees only), Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, New York (for state and local government employees only), North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Virgin Islands, Washington, and Wyoming. These states and territories are to adopt a standard comparable to that of OSHA's within six months of the effective date of the Federal rule.

#### List of Subjects

##### 29 CFR Part 1910

Asbestos, Cancer, Health, Labeling, Occupational safety and health, Protective equipment, Respiratory protection, Signs and symbols.

##### 29 CFR Part 1926

Asbestos, Cancer, Construction industry, Hazardous materials, Health, Labeling, Occupational safety and health, Protective equipment, Respiratory protection, Signs and symbols.

#### V. Authority

This document was prepared under the direction of Gerard F. Scannell, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210. Accordingly, pursuant to sections 4, 6(b), 8(c) and 8(g) of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657), section 107 of the Contract Work Hours and Safety Standards Act (Construction Safety Act) (40 U.S.C. 333), the Longshore and Harbor Workers' Compensation Act (33 U.S.C. 941), 29 CFR part 1911 and Secretary of Labor's Order No. 9-83 (48 FR 35736), 29 CFR parts 1910 and 1926 are hereby amended as set forth below.

Signed at Washington, DC, this 14th day of December, 1989.

Gerard F. Scannell,  
Assistant Secretary of Labor.

#### Amended Standards

Part 1910 of title 29 of the Code of Federal Regulations is hereby amended as follows:

#### PART 1910—[AMENDED]

##### Subpart Z—[Amended]

1. The authority citation for subpart Z of part 1910 continues to read as follows:

Authority: Secs. 6, 8, Occupational Safety and Health Act, 29 U.S.C. 655, 657; Secretary of Labor's Orders 12-71 (36 FR 8754), 8-78 (41 FR 25059), or 9-83 (48 FR 35736) as applicable; and 29 CFR part 1911.

All of subpart Z issued under sec. 6(b) of the Occupational Safety and Health Act, 29 U.S.C. 655(b), except those substances listed in the Final Rule Limits columns of Table Z-1-A, which have identical limits listed in the Transitional Limits columns of Table Z-1-A, Table Z-2 or Table Z-3. The latter were issued under Section 6(a) (5 U.S.C. 655(a)).

Section 1910.1000, the Transitional Limits columns of Table Z-1-A, Table Z-2 and Table Z-3 also issued under 5 U.S.C. 553. Section 1910.1000, Tables Z-1-A, Z-2 and Z-3 not issued under 29 CFR part 1911 except for the arsenic, benzene, cotton dust, and formaldehyde listings.

Section 1910.1001 also issued under Sec. 107 of Contract Work Hours and Safety Standards Act, 40 U.S.C. 333.

Section 1910.1002 not issued under 29 U.S.C. 655 or 29 CFR Part 1911; also issued under 5 U.S.C. 553.

Sections 1910.1003 through 1910.1018 also issued under 29 U.S.C. 653.

Section 1910.1025 also issued under 29 U.S.C. 653 and 5 U.S.C. 553.

Section 1910.1028 also issued under 29 U.S.C. 653.

Section 1910.1043 also issued under 5 U.S.C. 551 et seq.

Sections 1910.1045 and 1910.1047 also issued under 29 U.S.C. 653.

Section 1910.1048 also issued under 29 U.S.C. 653.

Sections 1910.1200, 1910.1499 and 1910.1500 also issued under 5 U.S.C. 553.

##### § 1910.1001 [Amended]

2. Section 1910.1001 is hereby amended by removing paragraph (f)(1) (vii).

#### PART 1926—[AMENDED]

##### Subpart D—[Amended]

3. The authority citation for subpart D of 29 CFR part 1926 continues to read as follows:

Authority: Secs. 4, 6, 8 Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Sec. 107 Contract Work Hours and Safety Standards Act (Construction Safety Act), 40 U.S.C. 333, and Secretary of Labor's Orders 12-71 (36 FR 8754), 8-78 (41 FR 25059), or 9-83 (48 FR 35736) as applicable. Sections 1926.55(c) and 1926.58 also issued under 29 CFR part 1911.

##### § 1926.58 [Amended]

4. Section 1926.58 is hereby amended by redesignating paragraph (f)(4).



Termination of monitoring, as paragraph (f)(4)(i), and adding a new paragraph (f)(4)(ii), to read as follows:

**§ 1926.58 Asbestos.**

- • • • •
- (f) • • •
- (4) • • •
- (ii) *Additional monitoring.*

Notwithstanding the provisions of paragraph (f)(4)(i) of this section, the employer shall institute the exposure monitoring required under paragraph (f)(3) of this section whenever there has been a change in process, control equipment, personnel or work practices that may result in new or additional exposures above the action level and/or excursion limit or when the employer has any reason to suspect that a change may result in new or additional exposures above the action level and/or excursion limit. Exception: When all employees within a regulated area are equipped with supplied-air respirators operated in the positive-pressure mode, the employer may dispense with the monitoring required by this paragraph.

5. Section 1926.58 is hereby amended by removing paragraph (g)(2)(iii).

[FR Doc. 89-29489 Filed 12-19-89; 8:45 am]  
BILLING CODE 4510-26-M

## DEPARTMENT OF TRANSPORTATION

### Coast Guard

#### 33 CFR Part 165

[CCGD TWO 89-06]

#### Regulated Navigation Area; Upper Mississippi River, Mile 200.0 to 201.5

**AGENCY:** Coast Guard, DOT.

**ACTION:** Final rule.

**SUMMARY:** The Coast Guard is eliminating the Regulated Navigation Area identified in 33 CFR 165.201. Entry into the area was controlled through the provisions of 33 CFR 165.201 to protect the construction of Lock and Dam 26 (Replacement) from hazards associated with passing tows. The construction work was completed on October 19, 1989, making the regulation unnecessary.

**EFFECTIVE DATES:** This regulation is effective on 01 January 1990. Comments on this regulation must be received on or before February 5, 1990.

**ADDRESS:** Comments should be mailed to Commander (dl), Second Coast Guard District, 1430 Olive Street, Room 310, St. Louis, MO 63103-2398. Any comments

received will be available for inspection and copying at the mailing address. Normal office hours are between 7:30 a.m. and 4:30 p.m., Monday through Friday, except holidays.

**FOR FURTHER INFORMATION CONTACT:**

DCC J.P. Burk, project officer, Captain of the Port, St. Louis, Missouri. Commercial (314) 425-5091; FTS 279-5091.

**SUPPLEMENTARY INFORMATION:**

Consistent with 5 U.S.C. 553, publishing a notice of proposed rulemaking and delaying the effective date would have been contrary to the public interest since the immediate action was desired to resume normal navigation to the Upper Mississippi River in the area of the new Lock and Dam 26. Although this regulation is published as a final rule without prior notice, an opportunity for public comments is nevertheless desirable to ensure that the regulation is both reasonable and workable. Accordingly, persons wishing to comment may do so by submitting written comments to the office listed under "ADDRESS" in this preamble. Commenters should include their names and addresses, identify the docket number for the regulations, and give reasons for their comments.

**Drafting Information**

The drafters of this regulation are DCC J. P. Burk, project officer, Captain of the Port, St. Louis, Missouri and LT M. A. Suire, project attorney, Second Coast Guard District Legal Office, St. Louis, Missouri.

**Discussion of Regulation**

This regulation is canceled due to the completion of a three year construction project on Lock and Dam 26. The regulated navigation area instituted to facilitate the construction project and ensure safe navigation has served its purpose and is no longer necessary.

**Economic Assessment and Certification**

This regulation is considered to be non-major under executive Order 12291 on Federal Regulation and nonsignificant under Department of Transportation regulatory policies and procedures (44 FR 11034; February 26, 1979.) The economic impact has been found to be so minimal that a full regulatory evaluation is unnecessary. The result of this regulation will be to remove restrictions on interstate commerce and to enhance navigation. Since the economic impact of this regulation is expected to be minimal, the Coast Guard certifies that it will not have a significant economic impact on a substantial number of small entities.

#### List of Subjects in 33 CFR Part 165

Harbors, Marine safety, Navigation (water), Security measures, Vessels, Waterways.

#### Final Regulation

In consideration of the foregoing part 165 of title 33 Code of Federal Regulations, is amended as follows:

#### PART 165—[AMENDED]

1. The authority citation for part 165 continues to read as follows:

Authority: 33 U.S.C. 1225 and 1231; 50 U.S.C. 191; 49 CFR 1.46 and 33 CFR 1.05-1(g), 6.04-6 and 160.5.

#### § 165.201 [Removed]

2. Section 165.201 is removed.

Dated: December 8, 1989.

W.J. Ecker,

Rear Admiral, U.S. Coast Guard, Commander, Second Coast Guard District.

[FR Doc. 89-29531 Filed 12-19-89; 8:45 am]

BILLING CODE 4910-14-M

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 52

[FRL-3698-4]

#### Approval and Promulgation of Implementation Plans; North Carolina: SO<sub>2</sub> Revision for Liggett & Myers and Burlington Industries

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** EPA is approving a source-specific revision to the North Carolina State Implementation Plan (SIP) for sulfur dioxide (SO<sub>2</sub>). This will replace the existing federally approved limit of 1.6 lb SO<sub>2</sub>/MBTU with the revised limit of 2.3 lbs SO<sub>2</sub>/MBTU for two sources. Ambient air quality modeling to support this revision was submitted to EPA by the State on April 2, 1986. The modeling demonstrated that a less stringent SO<sub>2</sub> limit is approvable for Burlington Industries and Liggett & Myers. The national ambient air quality standards (NAAQS) for SO<sub>2</sub> will be protected, and no interstate impacts or attainment problems are expected as a result of approving this SIP revision.

**DATES:** This action will be effective February 20, 1990 unless notice is received by January 19, 1990 that someone wishes to submit adverse or critical comments. If the effective date is delayed, timely notice will be published in the Federal Register.



**ADDRESSES:** Copies of the State's submittals are available for review at the following locations:

Public Information Reference Unit,  
Library Systems Branch,  
Environmental Protection Agency, 401  
M Street SW., Washington, DC 20460;  
Environmental Protection Agency,  
Region IV, Air Programs Branch, 345  
Courtland Street N.E., Atlanta,  
Georgia 30385;  
Air Quality Section, Division of  
Environmental Management, North  
Carolina Department Environment,  
Health and Natural Resources,  
Archdale Building, 512 North  
Salisbury Street, Raleigh, North  
Carolina 27611.

**FOR FURTHER INFORMATION CONTACT:**  
Rosalyn Hughes of the Region IV Air  
Programs Branch at the above address,  
telephone (404) 347-2864 or FTS 257-  
2864.

**SUPPLEMENTARY INFORMATION:** On  
December 7, 1982 (47 FR 54934), EPA  
approved, for all but 24 sources in the  
State of North Carolina, a revision to the  
State's regulation 15 NCAC 2D.0516  
which relaxed the  $\text{SO}_2$  limit for fuel-  
burning sources. The original version of  
2D.0516 prescribed a stepdown in  $\text{SO}_2$   
emissions for all fuel-burning sources  
from 2.3 pounds per million BTU heat  
input (lb/MBTU) to 1.6 lb/MBTU by July  
1, 1990. Air quality dispersion modeling  
submitted by the State in 1982 indicated  
that removal of the  $\text{SO}_2$  stepdown  
requirement was approvable for all but  
24 sources.

EPA indicated in the December 7,  
1982, Federal Register notice that if  
future modeling could show that the  
relaxed  $\text{SO}_2$  limit of 2.3 lb/MBTU was  
adequate to protect the NAAQS, then  
the stepdown requirement could be  
eliminated for other sources as well.

Liggett & Myers and Burlington  
Industries were two of the sources  
excluded from EPA's approval of the  
revised fuel-burning regulation. On April  
2, 1986, North Carolina submitted the  
ambient air quality modeling necessary  
to show that Liggett & Myers and  
Burlington Industries could be allowed  
to emit 2.3 lb/MBTU without  
jeopardizing the NAAQS.

In order for Liggett & Myers to  
maintain the 2.3 lb  $\text{SO}_2$ /MBTU limit a  
new operating permit had to be issued  
to restrict the total load capacity to 111.8  
MBTU/hr. The new permit (No. 2533R10)  
falls under an EPA-approved  
construction/operating permit program  
and is federally enforceable. Since it  
was originally submitted, permit No.  
2533R10 has expired but a new permit  
No. 2533R11 containing the same  
condition as 2533R10 has been issued.

To model compliance with the 2.3 lb  
 $\text{SO}_2$ /MBTU limit, Burlington replaced an  
old 81 MBTU/hr boiler with a new 29  
MBTU/hr one. The smaller boiler  
reduced their total load capacity from  
162 MBTU/hr to 110 MBTU/hr as stated  
in permit No. 4119R5. This permit also  
falls under the EPA-approved  
construction/operating permit program  
and is federally enforceable.

Both sources are located in Durham,  
North Carolina. Based on the block  
average interpretation of the  $\text{SO}_2$   
NAAQS, the Industrial Source Complex  
Short-Term (ISCST) and VALLEY  
models were used to establish the  
ambient impact of the allowable  $\text{SO}_2$   
emission limit. ISCST was used to  
monitor the downwash effects and  
VALLEY was used to account for the  
area's complex terrain. The controlling  
concentrations were in simple terrain  
given by ISCST. The modeling  
techniques (ISCST and VALLEY) which  
were used in this demonstration were  
based on modeling guidance in place at  
the time the analysis was performed,  
i.e., the EPA Guidance on Air Quality  
Models (1978). Since that time, revisions  
to the modeling guidance have been  
promulgated by EPA on September 9,  
1986, 51 FR 32176, and on January 8,  
1988, 53 FR 592. Because the modeling  
analysis was underway prior to  
promulgation of the revised guidance,  
EPA accepts the analysis. The results of  
the analysis, which included building  
wake effects, show the highest second  
highest (HSH) total concentration for the  
3-hour, 24-hour and annual time periods  
to be 834, 304, and 45  $\mu\text{g}/\text{m}^3$ ,  
respectively. These values include a  
HSH background 3 hour (155  $\mu\text{g}/\text{m}^3$ ), 24  
hour (56  $\mu\text{g}/\text{m}^3$ ) and annual arithmetic  
mean (11  $\mu\text{g}/\text{m}^3$ ) concentration for the  
respective averaging times. All three of  
these are below the NAAQS for these  
time periods.

Prevention of significant deterioration  
(PSD) provisions are not applicable  
because actual  $\text{SO}_2$  emissions at the two  
facilities have not increased with the  
elimination of the  $\text{SO}_2$  stepdown  
requirement. Since both sources are  
located in Durham County, an  $\text{SO}_2$   
attainment area, PSD requirements were  
examined and were found not to apply.

EPA's stack height regulations do not  
apply to this  $\text{SO}_2$  SIP revision because  
the stacks of both sources are below 65  
meters. Also, there are no merged plume  
issues associated with this source-  
specific SIP revision.

EPA has also reviewed this SIP  
revision for consistency with section  
110(a)(2)(E) of the Clean Air Act, and  
has found that the interstate impact of  
this revision is negligible. Due to present  
limitations on air quality modeling, the

ambient analysis was limited to a 50 km  
radius around the Liggett & Myers and  
Burlington Industries facilities. Both  
plants are located further than 50 km  
from any interstate boundary. Also, as  
shown in the technical support  
document for this SIP revision, the  
valley model demonstrated that the 3-  
hour and 24-hour ambient  $\text{SO}_2$   
concentrations resulting from these two  
sources' emissions would decrease  
markedly a short distance from the plant  
and that predicted ambient  
concentrations would be in every case  
below the  $\text{SO}_2$  standards. Therefore, in  
EPA's judgement, the revision will not  
contribute to  $\text{SO}_2$  nonattainment in  
Tennessee, South Carolina, Virginia or  
more distant states, nor will it interfere  
with PSD measures in the states  
surrounding North Carolina.

For further discussion of these issues  
and the air quality modeling analysis,  
please consult the technical support  
document, which is available for public  
inspection at the EPA Region IV office at  
the address listed above.

#### Final Action

EPA is approving the revision to North  
Carolina regulation 2D.0516, as  
submitted to EPA on March 22, 1977, as  
it applies to Liggett & Myers and  
Burlington Industries. This will replace  
the existing federally approved limit of  
1.6 lb  $\text{SO}_2$ /MBTU with the limit of 2.3 lb  
 $\text{SO}_2$ /MBTU for these two sources.

The public should be advised that this  
action will be effective 60 days from the  
date of this Federal Register notice.  
However, if notice is received within 30  
days that someone wishes to submit  
adverse or critical comments, this action  
will be withdrawn and two subsequent  
notices will be published before the  
effective date. One notice will withdraw  
the final action and another will begin a  
new rulemaking by announcing a  
proposal of the action and establishing a  
comment period.

Under section 307(b)(1) of the Act,  
petitions for judicial review of this  
action must be filed in the United States  
Court of Appeals for the appropriate  
circuit by February 20, 1990. This action  
may be challenged later in proceedings  
to enforce requirements. (See 307 (b)(2)).

#### Regulatory Process

Under the Regulatory Flexibility Act  
(5 U.S.C. 605(b)), EPA must assess the  
impact of proposed rules on small  
entities. (These rules are equivalent to  
the federally approved State regulations  
and maintain the status quo.) Sources  
have not been adversely affected by the  
State regulations; therefore the  
conclusions can be drawn that small



sources in Durham County will not be adversely affected by this decision.

This action has been classified as a Table 3 action by the Regional Administrator under the procedures published in the Federal Register on January 8, 1989. The Office of Management and Budget waived Table 2 and 3 SIP revisions (54 FR 2222) from the requirements of section 3 of Executive Order 12291 for a period of two years.

Nothing in this action should be construed as permitting or allowing or establishing a precedent for any future request for revision to any state implementation plan. Each request for revision to the state implementation plan shall be considered separately in light of specific technical, economic, and environmental factors and in relation to relevant statutory and regulatory requirements.

#### List of Subjects in 40 CFR Part 52

Air pollution control, Incorporation by reference, Intergovernmental relations, Sulfur oxides.

Note: Incorporation by reference of the State Implementation Plan for the State of North Carolina was approved by the Director of the Federal Register on July 1, 1982.

Lee A. DeHihns III,

Acting Regional Administrator.

Part 52 of chapter I, title 40 Code of Federal Regulations, is amended as follows:

#### PART 52—[AMENDED]

##### Subpart II—North Carolina

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401-7642.

2. Section 52.1770 is amended by adding paragraph (c)(62) to read as follows:

#### § 52.1770 Identification of Plan.

\* \* \*

(c) \* \* \*

(62) Permits for Liggett & Myers and Burlington Industries which were submitted as State Implementation Plan revisions on April 2, 1986, and resubmitted on October 24, 1989.

(i) Incorporation by reference

(A) Permit No. 2533R11 for Liggett & Myers Tobacco Company issued on May 22, 1989.

(B) Permit No. 4119R5 for Burlington Industries issued on March 3, 1987.

(ii) Additional material—none.

[FR Doc. 89-29579 Filed 12-19-89; 8:45 am]

BILLING CODE 6560-50-M

#### 40 CFR Part 52

[FRL-3677-1; TN-048]

#### Approval and Promulgation of Implementation Plans, Tennessee; Revision to the Nashville/Davidson County Portion of the State Implementation Plan

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

**SUMMARY:** On October 7, 1986, the State of Tennessee submitted the entire set of regulations for Nashville/Davidson County (Board Order 28-86) as a revision to the State Implementation Plan (SIP). The Nashville/Davidson County regulations were originally approved by EPA in 1972 as an appendix to the Tennessee SIP. Since then, the Nashville regulations have been revised and federally approved several times. Today, EPA is approving that portion of the Nashville regulations submitted in 1986 which has not been federally approved.

**DATES:** This action will be effective on February 20, 1990, unless notice is received by January 19, 1990, that someone wishes to submit adverse or critical comments. If the effective date is delayed, timely notice will be published in the Federal Register.

**ADDRESSES:** Copies of materials submitted by the State may be examined during normal business hours at the following locations:

Public Information Reference Unit,  
Library Systems Branch,  
Environmental Protection Agency, 401  
M Street SW., Washington, DC 20460  
Environmental Protection Agency,  
Region IV—Air Programs Branch, 345  
Courtland Street NE., Atlanta, Georgia  
30365

Division of Air Pollution Control,  
Tennessee Department of Public  
Control, 4th Floor, Customs House,  
701 Broadway, Nashville, Tennessee  
37219

Metropolitan Health Department, Air  
Pollution Control Division, 311 23rd  
Avenue North, Nashville, Tennessee  
37203

#### FOR FURTHER INFORMATION CONTACT:

Rosalyn D. Hughes of the EPA Region IV  
Air Programs Branch, at the above  
address and telephone number (404)  
347-2864 or FTS 257-2864.

**SUPPLEMENTARY INFORMATION:** Recently, EPA approved the entire set of regulations for two local air pollution control programs in Tennessee, Memphis and Shelby County on June 15, 1989 at 54 FR 25456 and Knox County on

August 3, 1989 at 54 FR 31953. EPA approved those regulations as a transfer of enforcement authority from the State to the local program based on the following conditions and conclusions:

1. The local regulations must be equal to the corresponding federally approved State regulations.

2. The local regulations cannot be treated as separable from the SIP, which the State submits and implements, but must be considered part of it.

3. Tennessee State law requires that the local regulations be equivalent to or not less stringent than the corresponding State regulation; therefore, Tennessee must certify to EPA that each regulation has been reviewed by the State and found to meet this requirement.

4. Tennessee must retain overall authority and responsibility for developing and implementing, including enforcing, the SIP.

On October 7, 1986, the State of Tennessee submitted the Nashville regulations, in their entirety, as a revision to the SIP. The regulations along with the Memphis and Shelby County and the Knox County regulations were stayed until Region IV could determine which regulations had previously been approved as part of the Tennessee SIP. Also, EPA had to determine the adequacy of the previous control strategy demonstrations in protecting the National Ambient Air Quality Standards.

Once the review was completed, EPA determined that the only Nashville regulations that were not federally approved were the stack height regulations. Using the aforementioned conditions and conclusions, no action was taken on Nashville stack height regulations, until the state regulations were federally approved. On October 19, 1988 at 53 FR 40881, the State regulations were approved. The definitions of "dispersion technique," "excessive concentration," "good engineering practice," and "nearby," which were added to Section 3-1, Definitions, of Nashville's Regulation No. 3, New Source Review, were found to be equivalent to the federally approved state regulations. Also equivalent to the federally approved state regulations is a paragraph added to Section 3-2, Registration and Permits of Regulation No. 3 pertaining to the application of stack height provisions.

#### Final Action

Since the Nashville stack height provisions (Board Order 28-86) are consistent with EPA policy and requirements, they are hereby approved. The public should be advised that this



action will be effective 60 days from the date of this Federal Register notice. However, if notice is received within 30 days that someone wishes to submit adverse or critical comments, this action will be withdrawn and two subsequent notices will be published before the effective date. One notice will withdraw the final action and another will begin a new rulemaking by announcing a proposal of the action and establishing a comment period.

Under section 307(b)(1) of the Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by February 20, 1990. This action may not be challenged later in proceedings to enforce its requirements. (See 307(b)(2).)

#### Regulatory Process

Under the Regulatory Flexibility Act (5 U.S.C. 605(b)), EPA must assess the impact of proposed rules on small entities. These rules are equivalent to the federally approved State regulations and maintain the status quo. Sources have not been adversely affected by the State regulations; therefore the conclusion can be drawn that small sources in Nashville-Davidson County will not be adversely affected by this decision.

This action has been classified as a Table 3 action by the Regional Administrator under the procedures published in the Federal Register on January 19, 1989 (54 FR 2214-2225). On January 6, 1989, the Office of Management and Budget waived Table 2 and 3 SIP revisions (54 FR 2222) from the requirements of Section 3 of Executive Order 12291 for a period of two years.

Nothing in this action should be construed as permitting or allowing or establishing a precedent for any future request for revision to any state implementation plan. Each request for revision to the state implementation plan shall be considered separately in light of specific technical, economic, and environmental factors and in relation to relevant statutory and regulatory requirements.

#### List of Subjects in 40 CFR Part 52

Air Pollution control, Incorporation by reference, Intergovernmental relations.

**Note:** Incorporation by reference of the State Implementation Plan for the State of Tennessee was approved by the Director of the Federal Register on July 1, 1982.

Dated: October 5, 1989.

Joe R. Franzmathes,  
Acting Regional Administrator.

Part 52 of chapter I, title 40, Code of Federal Regulations, is amended as follows:

#### Subpart RR—Tennessee

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401-7642.

2. Section 52.2220 is amended by adding paragraph (c)(98) to read as follows:

#### § 52.2220 Identification of plan.

(c) \* \* \*  
(98) Nashville/Davidson County stack height provisions (Board Order 28-86) submitted as revisions to the Tennessee SIP on October 7, 1986.

(i) Incorporation by reference.

(A) Tennessee Air Pollution Control Board Order 28-86 and Nashville/Davidson County Regulation No. 3, Sections 3-1 and 3-2 introductory paragraph which was approved September 17, 1986.

(ii) Other material.

(A) Letter of October 7, 1986, from the Tennessee Department of Health and Environment.

[FR Doc. 89-29506 Filed 12-15-89; 8:45 am]

BILLING CODE: 6560-50-M

#### 40 CFR Parts 60 and 61

[FRL-3698-7]

#### Delegation of Authority to Bernalillo County (New Mexico) for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP)

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice of delegation of authority.

**SUMMARY:** The Environmental Protection Agency (EPA) announces the delegation of authority to Albuquerque-Bernalillo County Air Quality Control Board ("the Board") and the Albuquerque Environmental Health Department (AEHD) to implement and enforce the New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) in Bernalillo County (New Mexico), including the City of Albuquerque. The provisions of full authority apply to all of the NSPS and NESHAP promulgated by the EPA through December 12, 1988, and partial authority covers all new and amended

standards promulgated after that date. However, the delegation of authority, under this notice, does not apply to the sources located on Indian lands within the boundaries of Bernalillo County as specified in the delegation agreement and in this notice. Also, this delegation of authority is not applicable to the NESHAP radionuclide standards specified under 40 CFR part 61.

**EFFECTIVE DATE:** December 8, 1989.

**ADDRESSES:** The AEHD's request and delegation agreement may be obtained by writing to one of the following addresses:

Chief, SIP New Source Section (6T-AN),  
Air Programs Branch, U.S.  
Environmental Protection Agency,  
1445 Ross Avenue, Dallas, Texas  
75202, Telephone: (214) 655-7214;  
Manager, Air Pollution Control Division,  
Albuquerque Environmental Health  
Department, The City of Albuquerque,  
P.O. Box 1293, Albuquerque, New  
Mexico 87103, Telephone: (505) 768-  
2600.

All other requests, reports, applications, and such other communications which are required to be submitted under 40 CFR part 60 and 40 CFR part 61 (including the notification required under Subpart A of the regulations) for the affected facilities, within the boundaries of Bernalillo County and in areas outside of Indian lands, should be sent directly to the AEHD at the above address. Sources located on Indian lands, in the State of New Mexico including Bernalillo County, should submit the information specified above to the EPA Region 6 Office at the address given in this notice. The sources located in the State of New Mexico, other than those areas specified above, should submit the information cited above to Chief, Air Quality Bureau, New Mexico Environmental Improvement Division, 1190 St. Francis Drive, Santa Fe, New Mexico 87503. All of the inquiries and requests concerning implementation and enforcement of the radionuclide standards under 40 CFR part 61, in the State of New Mexico, should be directed to the EPA Region 6 Office.

**FOR FURTHER INFORMATION CONTACT:**  
Mr. J. Behnam, P.E., SIP New Source Section, Air Programs Branch, United States Environmental Protection Agency, Region 6, 1445 Ross Avenue, Dallas, Texas 75202, Telephone number (214) 655-7214.

**SUPPLEMENTARY INFORMATION:** Sections 111(c) and 112(d) of the Clean Air Act allow the Administrator of the EPA to delegate EPA's authority to any State or local agency which can submit adequate



regulatory procedures for implementation and enforcement of the NSPS and NESHAP programs.

The New Mexico Air Quality Control Act (NMAQCA) allows, by ordinance, "A" class counties and any municipality within an "A" class county to create a municipal, county or joint air quality board to administer and enforce the provisions of the NMAQCA. The City of Albuquerque and Bernalillo County have jointly established the "Albuquerque-Bernalillo County Air Quality Control Board" (herein called "the Board") for administration and enforcement of NMAQCA because Bernalillo County is an "A" class county. Under the NMAQCA, the Albuquerque Environmental Health Department (AEHD) is the administrative and enforcement agency of the Board. The AEHD has established a program for the local administration and enforcement of the NMAQCA, in Bernalillo County, in lieu of the New Mexico Environmental Improvement Division (the State agency). Authority for the NSPS and NESHAP programs were delegated to the State of New Mexico (except for sources located in Bernalillo County and Indian lands) on March 15, 1985.

On July 18, 1989, the AEHD requested the U.S. Environmental Protection Agency (EPA) to delegate its authority to the AEHD for the New Source Performance Standards (NSPS) and the National Emissions Standards for Hazardous Air Pollutants (NESHAP) programs through December 12, 1988. The AEHD also requested partial delegation of authority for the technical and administrative review of new or amended NSPS and NESHAP promulgated by the EPA after December 12, 1988. The AEHD's request included (1) Air Quality Control Regulations 30 (NSPS) and 31 (NESHAP), (2) legal authority provided in Joint Air Quality Control Board Ordinances Article XVI and No. 88-45, and (3) the commitments for implementation and enforcement of the programs as documented in the AEHD Director's letter dated July 18, 1989. AQCRs 30 and 31 incorporate the Federal NSPS and NESHAP by reference through December 12, 1988.

The EPA reviewed the AEHD Director's request, Air Quality Control Regulations 30 and 31, and all other information submitted by the AEHD, including its request for implementation of the partial delegation of these programs. The EPA has determined that the Board and the AEHD have adequate authority and effective procedures for

implementing and enforcing the NSPS and NESHAP programs in Bernalillo County. Therefore, EPA delegated full authority to the Board and the AEHD through December 12, 1988, and partial authority for the technical and administrative review of new or amended NSPS and NESHAP promulgated by the EPA after December 12, 1988, subject to conditions and limitations of the delegation agreement dated December 8, 1989. No authority was delegated to the Board or AEHD for the radionuclide standards under 40 CFR Part 61 and sources located on Indian lands within the boundaries of Bernalillo County.

Today's notice informs the public that the EPA has delegated full authority to the AEHD for implementation and enforcement of the NSPS and NESHAP promulgated by the EPA through December 12, 1988, and partial authority is delegated for the new and amended standards after that date. All of the required information pursuant to the Federal NSPS and NESHAP (40 CFR part 60 and 40 CFR part 61) by sources located within the boundaries of Bernalillo County and in areas outside of Indian lands, should be submitted directly to the Albuquerque Environmental Health Department, the City of Albuquerque, P.O. Box 1293, Albuquerque, New Mexico 87103. Sources located on Indian lands in the State of New Mexico including Bernalillo County, should apply to the EPA Region 6 office at the address given in this notice. The sources located in the State of New Mexico, other than those areas specified above, should submit all of the required information to Chief, Air Quality Bureau, New Mexico Environmental Improvement Division, 1190 St. Francis Drive, Santa Fe, New Mexico 87503. All of the inquiries and requests concerning implementation and enforcement of the radionuclide standards under 40 CFR part 61, in the State of New Mexico, should be directed to the EPA Region 6 Office.

The Office of Management and Budget has exempted this information notice from the requirements of section 3 of Executive Order 12291.

This delegation is issued under the authority of section 111(c) and 112(d) of the Clean Air Act, as amended (42 U.S.C. 7411(c) and 7412(d)).

#### List of Subjects

##### 40 CFR Part 60

Air pollution control, Aluminum, Ammonium sulfate plants, Cement industry, Coal, Copper, Electric power

plants, Fossil-Fuel fired steam generators, Glass and glass products, Grain, Iron, Lead, Metals, Motor vehicles, Nitric acid plants, Paper and paper industry, Petroleum, Phosphate, Fertilizer, Sewage disposal, Steel, Sulfuric acid plants, Waste treatment and disposal, Zinc.

##### 40 CFR Part 61

Air pollution control, Asbestos, Benzene, Beryllium, Hazardous materials, Mercury, Vinyl Chloride.

Dated: December 8, 1989.

Joe D. Winkle,

Acting Regional Administrator.

Title 40, Parts 60 and 61 of the Code of Federal Regulations are amended as follows:

#### PART 60—[AMENDED]

1. The authority citation for Part 60 continues to read as follows:

Authority: 42 U.S.C. 7401, 7411, 7414, 7601.

2. Section 60.4 is amended by adding paragraph (b)(GG)(i) to read as follows:

##### § 60.4 Address.

\* \* \* \* \*

(b) \* \* \*

(GG) \* \* \*

(i) The City of Albuquerque and Bernalillo County: Director, The Albuquerque Environmental Health Department, The City of Albuquerque, P.O. Box 1293, Albuquerque, New Mexico 87103.

\* \* \* \* \*

#### PART 61—[Amended]

1. The authority citation for Part 61 continues to read as follows:

Authority: 42 U.S.C. 7401, 7411, 7414, 7601.

2. Section 61.04 is amended by adding paragraph (b)(GG)(i) to read as follows:

##### § 61.04 Address.

\* \* \* \* \*

(b) \* \* \*

(GG) \* \* \*

(i) The City of Albuquerque and Bernalillo County: Director, The Albuquerque Environmental Health Department, The City of Albuquerque, P.O. Box 1293, Albuquerque, New Mexico 87103.

\* \* \* \* \*

[FR Doc. 89-29578 Filed 12-19-89; 8:45 am]

BILLING CODE 6560-50-M



## DEPARTMENT OF TRANSPORTATION

## National Highway Traffic Safety Administration

## 49 CFR Part 541

[Docket No. T84-01; Notice 22]

RIN 2127-AC96

## Final Listing of High Theft Lines for 1990 Model Year; Correction

AGENCY: National Highway Traffic Safety Administration (NHTSA), DOT.

ACTION: Final rule; correction.

**SUMMARY:** This notice corrects typographical errors in the final rule published on September 20, 1989 (54 FR 38684). The errors appear in 49 CFR part 541, Appendix A-II "High Theft Lines with Antitheft Devices that are Exempted in Part from the Parts-Marking Requirements of this Standard Pursuant to 49 CFR part 543." Correction of these errors is necessary to avoid a misunderstanding about the beginning of partial exemptions from parts-marking for the car lines listed in Appendix A-II.

EFFECTIVE DATE: December 20, 1989.

## FOR FURTHER INFORMATION CONTACT:

Ms. Barbara A. Gray, Office of Market Incentives, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. Ms. Gray's telephone number is (202) 366-4808.

## SUPPLEMENTARY INFORMATION:

## List of Subjects in 49 CFR Part 541

Administrative practice and procedure, Labeling, Motor vehicles, Reporting and recordkeeping requirements.

## PART 541—[AMENDED]

In consideration of the foregoing, 49 CFR part 541 is amended as follows:

1. The authority citation for part 541 continues to read as follows:

Authority: 15 U.S.C. 2021-2024, and 2026; delegation of authority at 49 CFR 1.50.

## Appendix A-II [Amended]

1. Footnote 1 reference preceding the sentence at the end of the table is removed.

2. "MY 1999" is replaced by "MY 1990".

Issued on: December 14, 1989.

Barry Felrice,

Associate Administrator for Rulemaking.

[FR Doc. 89-29484 Filed 12-19-89; 8:45 am]

BILLING CODE 4910-59-M

## INTERSTATE COMMERCE COMMISSION

## 49 CFR Part 1043

[Ex Parte No. MC-5 (Sub-No. 7A)]

## Foreign Motor Carriers and Foreign Private Carriers Evidence of Insurance

AGENCY: Interstate Commerce Commission.

ACTION: Notice of final rules.

**SUMMARY:** The Commission is amending its existing regulations governing financial responsibility requirements for certain foreign motor carriers and foreign motor private carriers (Mexican) operating under certificates of registration issued under 49 U.S.C. 10530. Specifically, the Commission is revising its regulations at 49 CFR 1043.2(b)(4) to allow Mexican carriers to comply with our insurance requirements by purchasing trip insurance in lieu of certifying evidence of insurance on Forms BMC-91, BMC-91X or BMC-91MX. This action is necessary to bring Commission regulations into conformity with newly prescribed regulations of the United States Department of Transportation (DOT). Mexican carriers will no longer be required to file evidence of insurance with the Commission; however, they will be required to have evidence of insurance in each vehicle operating in the United States.

EFFECTIVE DATE: January 1, 1990.

## FOR FURTHER INFORMATION CONTACT:

Alice K. Ramsay (202) 275-0854 or Heber P. Hardy (202) 275-7148 [TDD for hearing impaired: (202) 275-1721].

**SUPPLEMENTARY INFORMATION:** The Motor Carrier Safety Act of 1984 (1984 Act), Pub. L. No. 98-554, Title II, 98 Stat. 2832, required Mexican motor carriers performing certain operations that had been exempt from regulation by the Interstate Commerce Commission to obtain, on an annual basis a certificate of registration, to conduct operations in the United States. This section also required these carriers to provide proof of minimum financial responsibility before the certificate of registration was issued.<sup>1</sup>

On November 18, 1988, Congress enacted the Truck and Bus Safety and Regulatory Reform Act of 1988 (1988 Act),<sup>2</sup> Public Law No. 100-690, 102 Stat.

<sup>1</sup> Regulations implementing this statutory provision were promulgated in Certificates of Registration for Certain Foreign Carriers, 133 M.C.C. 511 (1985). See also Foreign Mot. Private Cars, Inc., Nonhazardous Commods., 133 M.C.C. 461 (1985).

<sup>2</sup> Title IZ, subtitle B, of the Anti-Drug Abuse Act of 1988.

4527 at 4531. The 1988 Act 1988 requires all Mexican motor carriers that seek to operate commercial motor vehicles in the United States (except those holding certificates or permits issued under 49 U.S.C. 10922 or 10923) to obtain certificates of registration prior to such operation and to maintain specified levels of insurance coverage. Importantly, the Act of 1988 grants the Secretary of Transportation authority to issue regulations which would permit foreign motor carriers and foreign motor private carriers providing transportation of property under a certificate of registration issued under 49 U.S.C. 10530 to meet the minimum levels of financial responsibility only during periods in which these carriers are performing transportation of property in the United States.

The Department of Transportation has now amended its regulations to allow trip insurance for Mexican motor carriers under the certificate of registration program. In Minimum Levels of Financial Responsibility for Motor Carriers: Coverage Requirements for Certain Foreign Carriers; Mexico, 54 FR 49091 (published November 29, 1989), DOT adopted a final rule amending its insurance regulations at 49 CFR 387 to: (1) Exempt Mexican motor carriers from continuous coverage and notice of cancellation requirements; (2) allow those carriers to obtain insurance, in the required amounts, for periods of 24 hours or longer; and (3) require those carriers to have available for inspection in each of its vehicles copies of the following documents: (i) The certificate of registration; (ii) the required insurance endorsement (Form MCS-90); and (iii) an insurance identification card, binder or other document issued by an authorized insurer which specifies both the effective date and the expiration date of the insurance coverage.

The Commission is amending its existing regulations and adopting final rules at 49 CFR 1043.2(b)(4) to implement the 1988 Act regarding the financial responsibility of foreign carriers of property and to conform our regulations with the newly prescribed regulations of the DOT. The amended regulations revise the Commission's current insurance requirements<sup>3</sup> to allow

<sup>3</sup> The Commission's current regulations provide that no motor carrier, foreign or domestic, shall be issued authority to engage in transportation services, without having first obtained evidence of insurance, in the amounts prescribed. This insurance coverage must remain in effect on a continuous basis or the authority will be subject to revocation proceedings. This includes operations conducted for a carrier by other motor carriers.



Mexican carriers to satisfy their certificate of registration security requirements by having insurance coverage only during periods when these motor carriers are operating their vehicles in the United States.\* Mexican carriers will no longer be required to file evidence of insurance with the Commission to obtain a certificate of registration and will no longer be subject to the requirements of 49 CFR 1043.7(a)(6) and 1043.7(d), which relate to continuous coverage and the filing of notices of cancellation.

Our requirements are consistent with DOT's new regulations at 49 CFR 387.7(b)(3) and are necessary to permit Mexican carriers to obtain insurance coverage for periods of 24 hours or longer.

The new rules simplify insurance filing requirements that are already in effect. Therefore, the requirements will be adopted as final rules without public notice and opportunity for comment. The rules promulgated here shall be codified in the Code of Federal Regulations, title 49, part 1043. The Commission is serving a separate decision in Ex Parte No. 55 (Sub-No. 74A), Applications for Certificates of Registration for Certain Foreign Carriers, that amends its regulations at 49 CFR part 1171 to codify revisions in the certificate of registration application process.

To purchase a copy of this notice, write to, call, or pickup in person from: Dynamic Concepts, Inc., Room 2229, Interstate Commerce Commission, 12th Street and Constitution Avenue, NW., Washington, DC 20423. Telephone: (202) 289-4357/4359. [Assistance for the hearing impaired is available through TDD Services at (202) 275-1721.]

#### Energy and Environmental Considerations

We conclude that these revised rules will not significantly affect the quality of the human environment of the conservation of energy resources.

\* Effective January 1, 1990, Mexican carriers will be required to meet our minimum certificate of registration financial responsibility requirements by obtaining evidence of security, in the required amounts, for periods of 24 hours or longer, from insurance or surety companies, that meet the requirements of 49 CFR 1043.8. These foreign carriers must have available for inspection, in each vehicle operating in the United States, copies of the following documents: (1) The certificate of registration; (2) the required insurance endorsement (Form MCS-90); and (3) an insurance identification card, binder or other document issued by an authorized insurer which specifies both the effective date and the expiration date of the insurance coverage.

#### Regulatory Flexibility Analysis

We certify that this action will not have an adverse impact upon any small entities. Although a number of small foreign motor carriers will be affected by this action, the impact will be beneficial because it will reduce their filing requirements.

#### List of Subjects in 49 CFR Part 1043

Motor Carriers, Insurance, Surety Bonds.

Decided: December 11, 1989.

By the Commission, Chairman Gradison, Vice Chairman Simmons, Commissioners Lamboley, Phillips, and Emmett.

Noreta R. McGee,

Secretary.

For the reasons set forth in the preamble, title 49, chapter X, part 1043 of the Code of Federal Regulations is amended as follows:

#### PART 1043—SURETY BONDS AND POLICIES OF INSURANCE

1. The authority citation for part 1043 continues to read as follows:

Authority: 49 U.S.C. 10101, 10321, 11701 and 10927; 5 U.S.C. 553.

2. Section 1043.2(b)(4) is revised to read as follows:

§ 1043.2 Security for the protection of the public: Minimum limits.

\* \* \* \* \*

(b) \* \* \*

(4) *Foreign motor carriers and foreign motor private carriers.* Foreign motor carriers and foreign motor private carriers (Mexican), subject to the requirements of 49 U.S.C. 10530 and 49 CFR part 1171 regarding obtaining certificates of registration from the Commission, must meet our minimum financial responsibility requirements by obtaining insurance coverage, in the required amounts, for periods of 24 hours or longer, from insurance or surety companies, that meet the requirements of 49 CFR 1043.8. These carriers must have available for inspection, in each vehicle operating in the United States, copies of the following documents:

- (1) The certificate of registration;
- (2) The required insurance endorsement (Form MCS-90); and
- (3) An insurance identification card, binder, or other document issued by an authorized insurer which specifies both the effective date and the expiration date of the insurance coverage.

Notwithstanding the provisions of § 1043.1(a)(1), the filing of evidence of insurance is not required as a condition to the issuance of a certificate of registration. Further, the reference to continuous coverage at § 1043.7(a)(6)

and the reference to cancellation notice at § 1043.7(d) are not applicable to these carriers.

\* \* \* \* \*

[FR Doc. 89-29581 Filed 12-19-89; 8:45 am]

BILLING CODE 7035-01-M

#### 49 CFR Part 1171

[Ex Parte No. 55 (Sub-No. 74A)]

#### Applications for Certificates of Registration for Certain Foreign Carriers

AGENCY: Interstate Commerce Commission.

ACTION: Amendment of final rules.

**SUMMARY:** In a decision served October 18, 1989, and published in the Federal Register on October 19, 1989 at 54 FR 42958, the Commission adopted amendments to the rules at 49 CFR part 1171 governing applications for certificates of registration for certain foreign carriers to implement changes in the statutory requirements at 49 U.S.C. 10530 and 10922(l) enacted as part of the Truck and Bus Safety and Regulatory Reform Act of 1988 (Title IX, Subtitle B of the Anti-Drug Abuse Act of 1988; Pub. L. No. 100-690, 102 Stat. 4181). Subsequently, the Department of Transportation adopted a final rule amending its insurance regulations at 49 CFR Part 387 to allow Mexican motor carriers to satisfy insurance requirements through trip insurance. The Commission is here amending its rules to reflect DOT's trip insurance provisions. The revised rules are set forth below.

**EFFECTIVE DATE:** January 1, 1990.

**FOR FURTHER INFORMATION CONTACT:** Richard B. Felder (202) 275-7691 or Joseph B. O'Malley (202) 275-7928. [TDD for hearing impaired: (202) 275-1721.]

**SUPPLEMENTARY INFORMATION:** Additional information is contained in the Commission's decision. To purchase a copy of the full decision, write to, call, or pick up in person from: Dynamic Concepts, Inc., Room 2229, Interstate Commerce Commission Building, Washington, DC 20423. Telephone: (202) 289-4357/4359. [Assistance for the hearing impaired is available through TDD services (202) 275-1721].

#### Energy and Environmental Considerations

These rule revisions will not significantly affect either the quality of the human environment or the conservation of energy resources.



**Regulatory Flexibility Analysis**

We reaffirm our prior certification. The rules we are adopting will not have significant economic impact on a substantial number of small entities. The proposed modifications will continue an expedited procedure for foreign motor carriers and foreign motor private carriers to obtain certificates or registration consistent with statutory changes.

**Paperwork Reduction Analysis**

It is estimated that an average of 1 burden hour per response is required to complete the information elicited on the proposed revised licensing Form OP-2. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Comments concerning the accuracy of this burden estimate or suggestions for reducing this burden should be directed to the Section of Administrative Services, Interstate Commerce Commission, and to the Office of Management and Budget, Paperwork Reduction Project (OMB No. 3120-0079), Washington, DC 20503.

**List of Subjects in 49 CFR Part 1171**

Administrative practice and procedure, Motor carriers, and Insurance.

Decided: December 11, 1989.

By the Commission, Chairman Gradison, Vice Chairman Simmons, Commissioners Lamboley, Phillips, and Emmett.

Noreta R. McGee,  
Secretary.

For the reasons set forth in the preamble, title 49, chapter X, part 1171 of the Code of Federal Regulations is amended as follows:

**PART 1171—RULES GOVERNING APPLICATIONS FOR CERTIFICATES OF REGISTRATION BY FOREIGN MOTOR CARRIERS AND FOREIGN MOTOR PRIVATE CARRIERS UNDER 49 U.S.C. 10530**

1. The authority citation for 49 CFR Part 1171 continues to read as follows:

Authority: 49 U.S.C. 10922 and 10530, 5 U.S.C. 553.

2. Section 1171.6(b)(2) is revised to read as follows:

**§ 1171.6 Commission review of the application.**

• • • • •

(b) • • • • •

(2) If the employee board grants all or part of the application, the Commission

will issue a certificate of registration authorizing specified operations provided that applicant has demonstrated compliance with 49 CFR 1044 (designation of process agent). If applicant has not complied with this requirement, the Commission will issue a notice stating that a certificate of registration will be issued upon such compliance. No certificate or registration shall be issued prior to compliance.

• • • • •

[FR Doc. 89-29495 Filed 12-19-89; 8:45 am]  
BILLING CODE 7035-01-M

**DEPARTMENT OF COMMERCE****National Oceanic and Atmospheric Administration****50 CFR Part 655**

[Docket No. 90764-9289]

**Atlantic Mackerel, Squid, and Butterfish Fisheries**

**AGENCY:** National Marine Fisheries Service (NMFS), NOAA, Commerce.

**ACTION:** Notice of final initial specifications for the 1990 Atlantic mackerel fishery.

**SUMMARY:** NOAA issues this notice of final initial specifications for the 1990 fishing year for Atlantic mackerel. Regulations governing this fishery require the Secretary of Commerce (Secretary) to publish specifications for the upcoming fishing year. This action is intended to fulfill this requirement and promote the development of the U.S. Atlantic mackerel fishery.

**EFFECTIVE DATE:** January 1, 1990.

**ADDRESS:** Copies of the Mid-Atlantic Fishery Management Council's Analysis and recommendations are available from John C. Bryson, Executive Director, Mid-Atlantic Fishery Management Council, room 2115, Federal Building, 300 South New Street, Dover, DE 19901.

**FOR FURTHER INFORMATION CONTACT:** Kathi L. Rodrigues, 508-281-9324 or Richard Seamans, 508-281-9244.

**SUPPLEMENTARY INFORMATION:**

Regulations implementing the Fishery Management Plan for Atlantic Mackerel, Squid, and Butterfish Fisheries (FMP), prepared by the Mid-Atlantic Fishery Management Council (Council), appear at 50 CFR part 655. These regulations stipulate that the Secretary will publish a notice specifying the initial annual amounts of the initial optimum yield (IOY) as well as the amounts for allowable biological catch (ABC) domestic annual harvest (DAH),

domestic annual processing (DAP), joint venture processing (JVP), and total allowable levels of foreign fishing (TALFF) for the species managed under the FMP. No reserves are permitted under the FMP for any of these species.

Procedures for determining the initial annual amounts are found in § 655.21. The Secretary published a notice of preliminary initial specifications (preliminary notice) for Atlantic mackerel on August 2, 1989 (54 FR 31862). The comment period ended September 1, 1989. Specifications for *Loligo* and *Illex* squids and butterfish will be published separately.

The following table contains the final initial specifications for Atlantic mackerel. These specifications are based on the recommendations of the Mid-Atlantic and New England Fishery Management Councils and consideration of comments received from the public. The Regional Director, Northeast Region, National Marine Fisheries Service (Regional Director), after considering all of the information available, believes these specifications will stimulate the development of the U.S. mackerel industry, leading to increased benefits to the Nation.

**Table 1.—Initial Annual Specifications for Atlantic Mackerel for the 1990 Fishing Year January 1 through December 31, 1990**

	(Metric tons)
ABC.....	<sup>1</sup> 368,000
IOY.....	120,000
DAH.....	<sup>2</sup> 96,000
DAP.....	12,000
JVP.....	54,000
TALFF.....	<sup>3</sup> 24,000

<sup>1</sup> IOY can rise to this level, according to the FMP.

<sup>2</sup> Includes 15,000 mt projected recreational catch based on the formula contained in 50 CFR 655.21 plus an additional 15,000 mt to promote recreational use.

<sup>3</sup> Foreign partner is required to purchase JVP and U.S. processed product in the ratio 8 mt TALFF to 3 mt JVP and 1 mt U.S. product for applicants requesting directed fishing. Export declaration forms are required as proof of purchase.

**Changes to the Preliminary Specifications**

New information received by NMFS after publication of the preliminary notice has led to a modification of several of the components. This information involves the specific amounts requested for foreign fishing and detailed contracts between the foreign partners and U.S. vessel owners. The Council and the Regional Director believe that the business relationships being developed at this time are critical to the success of the fishery in 1990 and



the continued growth in the U.S. sector. The change in specification levels published in the preliminary notice is intended to foster the development of business agreements of mutual benefit to both parties and achieve the objectives of the FMP.

The Council and the Regional Director have repeatedly emphasized the importance of fulfilling the commitments made at the beginning of the fishing year. This point was stressed in the preliminary notice in the Council's eighth recommended condition:

"Applications from a particular nation for joint ventures and directed foreign fishing for 1990 should not be considered until that nation's purchase obligations for 1989 have been fulfilled" (condition 8). In addition, this final notice imposes a further condition that no TALFF will be allocated until a foreign nation's purchases of mackerel (in 1989) from U.S. fishing vessels (JVP) and U.S. processors result in conformance to the required 8:3:1 ratio or equivalent ratio authorized by the Regional Director in effect in 1989, based on the actual allocation of TALFF to that nation.

The schedule outlined in the FMP requires the Regional Director to submit his determination of final initial specifications before the 1989 fishery ends on December 31. At the time the Regional Director submitted his determinations in November, none of the nations applying for a 1990 allocation had met their 1989 purchase obligations. A strict interpretation of the Council's condition 8 would not only render each nation ineligible for a 1990 allocation of JVP and TALFF, but would also be premature since historically, mackerel are available to the fishery in December. The Regional Director does not wish to preclude any opportunity to fulfill 1989 obligations. Therefore, the Regional Director has not presupposed that obligations will not be met and has set the final initial specifications to accommodate the applicants should they become eligible for an allocation. In addition, the Regional Director has modified the purchase ratio that was contained in the preliminary notice from 8:3 and 2 to 8:3 and 1. The reasons for this modification are found below in the discussion of "Specification Levels".

#### Atlantic Mackerel Development Policy

The Council's policy in managing the mackerel fishery has been formulated to stimulate the growth and development of the U.S. industry. This has been accomplished by linking the available TALFF allocation to purchases of JVP and DAP. More recently, the Council and the Regional Director have focused on the "performance record" of a

particular joint venture in evaluating the true benefits derived from the IOY and its component parts of DAH and TALFF. Fulfillment of the commitments made at the beginning of the season has been problematic in 1989, consistent with previous years. As a result of inadequate documentation of product sales, NMFS will require the foreign nation or its U.S. representative to supply adequate sales documentation in the form of an export declaration to the Regional Director.

The 1989 fishery purchase obligations have not been achieved thus far in 1989. The actual amounts and ratios of joint venture and processed product commitments and purchases cannot be released because of confidentiality restrictions; however, the level of performance can be expressed as a percentage without revealing confidential information. The following table indicates the level of performance achieved as of November 1, 1989, by nations taking part in the 1989 fishery:

TABLE 2.—Percentage of Commitment Achieved in 1989<sup>1</sup> By Foreign Nations

East Germany .....	54
Netherlands .....	29
Poland .....	18
USSR .....	0.4

<sup>1</sup> As of Nov. 1, 1989.

The 1990 applications for foreign fishing were received from two of the countries listed above. For a 1990 mackerel fishery to occur, according to condition 8, the U.S. industry would have to supply additional product to foreign partners during November and December of 1989. U.S. vessel owners entered into contracts with the foreign nations' representatives to supply this product. The Regional Director expects U.S. vessels to supply, and the foreign partners to purchase the amounts contained in the 1989 contracts. Failure of the foreign partner to purchase the required amounts may disqualify a foreign nation from a TALFF allocation for 1990. The failure of U.S. vessels to fulfill their 1989 contracts may result in a more favorable evaluation of the foreign nation demonstrating a "good faith effort" to purchase the amounts specified in the contracts. The Regional Director will closely monitor the fishing activities during December and present his views and recommendations to the allocations board based on the performance records of the particular foreign nation and the domestic industry.

#### Specification Levels

Benefits accrue to the United States from the purchase of joint venture and processed product in exchange for TALFF. The IOY has been set at a level that results in TALFF and JVP levels to stimulate these purchases. NOAA will recommend to the Department of State that allocations of TALFF in 1990, if any, be released in increments of 25 percent, as they were in 1989. Further increments are to be allocated based on performance. The Secretary of State, if he so decides, may initially release up to 50 percent of a nation's allocation under section 201(e)(1)(C) of the Magnuson Fishery Conservation and Management Act (Act). The amount of TALFF recommended by the Council and adopted by the Regional Director is sufficient to accommodate 50 percent of each nation's request. This does not imply that TALFF will be increased. Increases to TALFF are possible under § 655.21(b)(2)(v) if the Regional Director determines, in consultation with the Council, that increases in the TALFF would provide maximum net benefits to the Nation. Discussion of the remaining IOY components follows.

The Regional Director has projected a DAH of 96,000 metric tons (mt) based on: (1) The unusually high amount of JVP requested by foreign applicants (54,000 mt); (2) the expected U.S. production for the bait market (approximately 6,000 mt); (3) U.S. production necessary to fulfill foreign purchase obligations linked to TALFF (estimated 6,000 mt); and (4) the projected recreational catch recommended by the Council (30,000 mt). Numbers (2) and (3) above represent the projected level of DAP (12,000 mt).

In addition to the above changes to the preliminary notice, the Regional Director has modified the purchase requirements contained in footnote "C" to Table 1.; the requirements are: (1) Foreign partners are required to purchase JVP and U.S. product in the ratio of 8 mt TALFF to 3 mt JVP and 1 mt of U.S. product; and (2) export declarations are required as proofs of purchase. This first modification responds to the comments received during the comment period and to a recent vote of the Council's Foreign Fishing Committee. The original vote of the full Council recommended that purchases be made in the ratio of 8 mt TALFF to 3 mt JVP and 2 mt U.S. processed product.

The high ratio of processed product component is particularly troublesome, as it appears to be a limitation to foreign nations in terms of meeting this



requirement and making fishing in U.S. waters profitable. Therefore, an alternative ratio that represents a financially sound package to foreign nations and contains leverage that results in purchase of U.S. caught and processed mackerel is one that will be in the best interests of the United States.

The 9:3 and 1 ratio requirement of TALFF, JVP, and processed product in 1989 is a combination that should be sufficient incentive to foreign nations to purchase JV-caught and U.S.-processed mackerel in exchange for TALFF. However, foreign nations have failed to meet it thus far in 1989. This failure is due mostly, in NMFS' opinion, to a lack of commitment by foreign nations, and to much less an extent the lack of availability of product, market, and other contingencies. It may be that the TALFF component is too liberal to stimulate the U.S. purchases we expect.

After consideration of all of the above, the Regional Director believes a purchase ratio 8:3 and 1 is appropriate for the 1990 fishing year. The Council provided flexibility to the venture operations by allowing equivalent ratios of 8:6 and 1 or 8:0 and 3 to its 8:3:2 recommendation. The ratio 8:9 and 0 was rejected by the Council because it did not contain a processed product purchase component. The Council stressed that the absence of a U.S. processed product purchase component, at this stage in the development of the U.S. industry, is not "in a manner keeping with the goals of the FMP and the Council's policy". Consistent with the Council's recommendation for flexibility, the 8:3:1 requirement may be substituted with the equivalent 8:0:2, but not 8:6:0.

A subsequent vote by the Council's Foreign Fishing Committee embraced the concept of a joint-venture-only operation. This type of application would also lack a U.S. processed product purchase, contrary to the full Council's wishes. However, there is no TALFF associated with such a proposal for which processed product would act as a partial *quid pro quo*. The Regional Director has revised the Council's recommended purchase ratio to apply only to those applicants requesting TALFF.

In addition to the specifications in Table 1, the Council recommended that conditions and restrictions be placed on the foreign fishery for mackerel. These recommendations are intended to minimize harvesting conflicts among users and impacts on other regional resources. The recommended conditions were contained in the preliminary notice and are listed below. Changes were made to conditions 2, 4, 7 and 8.

Condition 2 clarifies the language to apply only to applicants requesting TALFF. The Regional Director has modified condition 4 by dropping the imposition that foreign permits should be limited to the number of vessels needed to harvest an allocation. It is economically unreasonable to expect that a foreign nation would send over more vessels than necessary to harvest an allocation. In addition, condition 4 also establishes the requirement that nations receiving foreign fishing allocations dedicate a vessel to receive JVP exclusively. The purpose of this is to prevent the foreign vessel from temporarily abandoning its commitment to purchase JVP in favor of fishing directly for mackerel. A clarification was added to condition 7 that describes the regulatory authority for increasing TALFF. Condition 8 now indicates that the Regional Director will evaluate foreign and domestic performance.

1. Directed foreign fishing for Atlantic mackerel should be prohibited south of 37°30'N. latitude. Joint ventures are allowed, but river herring bycatch south of that latitude may not exceed 0.25 percent of the over-the-side transfers of Atlantic mackerel; directed foreign fishing for Atlantic mackerel (allowed north of 37°30'N. latitude and 20 miles seaward only) should be limited to a 1 percent river herring bycatch; river herring TALFF should be 100 mt with the possibility of an increase to 200 mt.

2. Purchase requirements for foreign nations that request TALFF should be set at a ratio of 8 mt TALFF to 3 mt JVP and 1 mt U.S. processed product. The equivalent 8:0:2 ratio may be substituted to fulfill the purchase requirement, but 8:6:0 is not permitted.

3. Allocations should be distributed in increments in order to ensure compliance with the 8:3 and 1 ratio by the end of the fishing year.

4. Foreign nations participating in the 1990 Atlantic mackerel fishery will be required to dedicate a vessel to receive JVP from U.S. vessels exclusively. This dedicated vessel will not be permitted to conduct directed fishing operations.

5. The Regional Director should do everything within his power to reduce impacts on marine mammals in prosecuting the Atlantic mackerel fisheries.

6. Increases in IOY during the year should not exceed 200,000 mt.

7. TALFF should not exceed 24,000 mt, unless the Regional Director, in consultation with the Council, determines that it is appropriate under § 655.21(b)(2)(v).

8. Applications from a particular nation for joint ventures and directed foreign fishing for 1990 will not be

decided on until the Regional Director determines, based on an evaluation of performance, that the nation's purchase obligations for 1989 have been fulfilled.

#### Responses to Comments

Comments were received from the Embassy Officials of the German Democratic Republic (GDR) and the Polish People's Republic (PPR), European Economic Community (EEC), Marine Resources Company International (MRCI), Scan Ocean, Inc., and Mayflower International Ltd.

*Comment:* GDR commented that it has the potential to utilize approximately 30,000 metric tons for its domestic market, providing it can be produced competitively with other alternatives. GDR believes the proposed conditions are unrealistic. The GDR believes, given the state of the resource, that 100,000 mt should be harvested from the stock in 1990. GDR also commented that it was inconvenienced by interruptions to their operations in 1989 while waiting for the second increment of their allocation. The GDR urged that the specifications contain sufficient flexibility for foreign vessels to participate in the fishery uninterrupted, should non compliance with the ratios be caused by shortcomings of the domestic industry. The GDR intends to work out mutually beneficial arrangements with the U.S. industry.

*Response:* The GDR's objective, to produce a product that would yield economic benefits to those involved, is shared by the United States. The Regional Director is also displeased by the lack of coordination among joint venture parties that led to vessels laying idle during the 1989 fishery. The conditions imposed on the fishery are intended to improve coordination and ensure that benefits to all parties are realized. The Regional Director notes the GDR's intention to meet with the U.S. industry, and will consider practical options for achieving the common objective that may arise from this meeting.

The GDR will note that the final specifications contained in this notice provide TALFF and JVP levels that could fulfill its needs.

The specifications provide for a harvest level of 120,000 mt from U.S. waters. Whether or not this level of harvest is achieved largely depends on the success of the joint ventures, domestic and recreational fisheries.

*Comment:* The EEC commented favorably on the early publication of the proposed specifications. The EEC reiterates its serious concern for reductions in TALFF which it believes to



be unjustified. The EEC does not understand how reducing the possibilities for cooperation with foreign fishermen by reducing TALFF could contribute toward achievement of full utilization of fisheries by U.S. harvesters and processors. The capacity and intent of the United States to harvest and process does not reflect the IOY set by the Council and reduces the portion which can be made available to TALFF. The EEC protests condition 7 of the proposed specifications that "TALFF should not exceed 24,000 mt" which appears contrary to producing maximum benefits to the United States.

The EEC also states that scientific evidence suggests the quality of fish caught would improve from stock reduction and that the scientific data does not support the gap between ABC and IOY. Higher TALFF would benefit the U.S. industry. The EEC objected to the 8:3 and 2 ratio because it is too difficult to achieve.

**Response:** The Regional Director is pleased that early publication of the proposed specifications may have a positive effect on business arrangements in 1990. The Regional Director is equally concerned over the misconceptions surrounding the annual determination of IOY. IOY is a modification of ABC, based on the Council's analysis of nine economic factors contained in the FMP for this species. IOY is not simply a biological amount, although it is tied to the biological condition of the fishery and may not exceed the allowable biological catch. The gap between the ABC and IOY reflects the economic condition of the fishery. The economic condition of the fishery has resulted in lower TALFF.

The EEC questioned the reduction in TALFF from the previous year and believes that reducing TALFF diminishes possibilities for cooperation with foreign fishing interests and conflicts with the U.S. goal of full utilization. The view held by the U.S. industry, represented by the Council is that little benefit, if any, is derived from TALFF alone. Substantive benefits to the United States are derived from the cooperative joint ventures that involve purchases of JVP and domestic processed product. For these ventures to take place, cooperation between the foreign nation and U.S. partner must begin prior to the onset of foreign fishing. Furthermore, because TALFF is a component of IOY that provides the least benefit to the United States, the increased interest in JVP over last year has resulted in a lower initial TALFF for 1990.

The recommended condition concerning TALFF states that TALFF

should not exceed 24,000 mt. The Regional Director agrees that the statement should be clarified to reflect § 655.21(b)(2)(v) of the regulations implementing the Council's FMP for this species. This section provides that the Regional Director may adjust the IOY, in consultation with the Council, if new information or changed circumstances indicate that the IOY should be increased to produce maximum net benefits to the United States, based upon the nine economic factors used to determine the preliminary IOY.

The Regional Director is informed as to the high abundance of the Atlantic mackerel stock and the density dependent factors that appear to be reducing the growth of individuals. The IOY specified in this notice provides the opportunity for large harvests to alleviate this pressure on the resource.

**Comment:** PPR commented that the ratios of 8 mt TALFF to 3 mt JVP and 2 mt processed product are extremely restrictive and may make any venture with the United States cost prohibitive. The PPR asked if it is possible to change these ratios. In addition, the PPR wanted an indication as to whether it would be required to fulfill its 1989 obligations if the United States is unable to produce a sufficient supply of processed product.

**Response:** The Regional Director fully expects the PPR to fulfill its 1989 obligations prior to engaging in a fishery for Atlantic mackerel in the exclusive economic zone (EEZ). The Regional Director and the Council are seeking demonstrations of good faith and performance. If 1989 obligations are not met, it is doubtful the United States can expect to derive benefits from a similar arrangement in 1990. The U.S. fleet has the capacity to supply an individual nation or nations with the necessary amounts of JVP and processed product but may not be able to supply all nations wishing to engage in the fishery.

The ratios of 8:3 and 2 have been revised based on the comments received and the anticipated success of the U.S./foreign joint ventures. The Regional Director believes the revised ratios (8:3 and 1) will provide the maximum benefits to the United States.

**Comment:** Mayflower International, Ltd., expressed concern that the methodology utilized by the Council and the NMFS to "Americanize" the fishery is unsuitable for this species considering its place in the world market. Mayflower states the conditions for foreign participation may be overly rigid and asserts that bilateral negotiations involving U.S. industry and the foreign nations are necessary to maximize U.S. benefits.

**Response:** The Regional Director is aware that the current U.S. harvest of Atlantic mackerel represents a small portion of the total world harvest and is working with the Council to develop recommendations which enhance opportunities in foreign markets for the U.S. industry. This is the intent of some of the conditions. The Regional Director is interested in other arrangements that may arise from bilateral negotiations with industry. The 8:3 and 2 ratio has been revised to 8:3 and 1 based on the comments received.

**Comment:** Scan Ocean, Inc. commented that directed foreign fishing should be allowed south of 37°30' N. latitude because foreign vessels may need to fish there due to weather and sea conditions or due to the location of the resource. River herring bycatch would be controlled by the 25 percent cap of allowable bycatch. Scan Ocean also commented that the ratios of 8:3 and 2 increase the cost of the venture by 25 percent. In addition, the less restrictive ratio of the previous year was not met because the U.S. fleet had extreme difficulty supplying foreign fleets. The fishery should have the opportunity to operate under the 9:3 and 1 ratio a second year to determine its feasibility before the ratio is made more restrictive.

Scan Ocean agrees that allocations should be distributed in increments to ensure compliance. Consultations should take place with U.S. partners early so that fishing operations are not interrupted and the costs of having vessels lay idle are minimized.

The number of foreign vessels allowed to fish should be limited. A 24,000 mt cap on TALFF will not maximize benefits to the United States. If fishing is successful, more U.S. vessels will want to engage in joint ventures and sufficient TALFF will not be available to accommodate it. A cap on TALFF also caps U.S. output. Scan Ocean believes foreign nations are very concerned about the fact that 1990 applications will not be considered until 1989 purchase obligations are fulfilled, given that the U.S. industry cannot supply the fish. Scan Ocean believes the foreign nations should not be penalized for this situation. The foreigners believe the contract agreements signed by the United States and foreign nation representatives were sufficient to fulfill their purchase obligations. Foreign nations may have to consider legal action against the U.S. parties for non-fulfillment of contract obligations.

**Response:** The Council's recommendation to prohibit a directed foreign fishery south 37°30' is based on



its concern for river herring bycatch from this area and its observation that the recreational fishery for mackerel appeared to improve with the absence of foreign activity from this area during the 1989 fishing year. U.S. commercial vessel captains and recreational fishermen believe that the large foreign trawlers break up the schools, making it difficult to catch mackerel in the quantities that were caught during periods when no foreign fishing occurred. For the years 1983-1988, 90 percent of the foreign fishing activity for mackerel (JVP & TALFF) occurred north of 37°. Although there is no scientific evidence to support the contention that foreign trawlers break up schools of mackerel, the long-standing concern for river herring bycatch in this area and the fact that the bulk of the foreign fishery is conducted northward, convinces the Regional Director that this requirement is reasonable.

As stated in previous responses, the ratio 8:3 and 2 has been revised to 8:3 and 1.

Allocations are released to foreign nations in increments of up to 50 percent of a nation's allocation in accordance with section 201(e)(1)(C) of the Act. The NMFS agrees that interruptions to fishing operations are costly and

wasteful to all involved, whether due to the unpreparedness of a foreign vessel to accept U.S. product over-the-side, or to the inability of a U.S. vessel to deliver to the foreign partner. With this in mind, the Council and NMFS developed and published the specifications for the 1990 fishing year early, August 1989, so that the parties could work out these logistical problems. Both parties to the joint venture have been urged to work out arrangements in advance to ensure that the supply and demand exist in the proper quantities at the proper time on the fishing grounds.

The 24,000 mt TALFF represents the amount the Council and NMFS believe is necessary to provide maximum benefits to the United States. Sufficient flexibility exists in the implementing regulations to adjust TALFF, if appropriate.

The Regional Director expects the U.S. fishermen and foreign vessels to fulfill their contractual obligations. This remains a recommended condition of the 1990 fishery. It is not the intent of NMFS to penalize foreign nations. The responsibility for the success or failure of a joint venture rests on both parties. The loss of opportunity to U.S. vessels could be considered a "penalty" to them. However, the failure of a venture

in 1989 is reason to expect the same in 1990. The limited amount of TALFF requires that ventures with the most promise for success be given priority.

*Comment:* The director of joint venture operations for MRCI reiterated to the Council and the Regional Director his intent to organize a large-scale joint venture for Atlantic mackerel. The venture target amount is 30,000 mt. No TALFF will be requested in conjunction with this venture.

*Response:* The participation of U.S. vessels in a joint venture of this nature would contribute toward the development of the U.S. industry.

#### Classification

This action is authorized by 50 CFR part 655 and complies with Executive Order 12291.

Authority: 16 U.S.C. 1801 *et seq.*

#### List of Subjects in 50 CFR Part 655

Fisheries, Reporting and recordkeeping requirements.

Dated: December 14, 1989.

James E. Douglas, Jr.,

Acting Assistant Administrator for Fisheries.

[FR Doc. 89-29532 Filed 12-15-89; 8:45 am]

BILLING CODE 3510-22-M



# Proposed Rules

Federal Register

Vol. 54, No. 243

Wednesday, December 20, 1989

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

## DEPARTMENT OF AGRICULTURE

### Commodity Credit Corporation

#### 7 CFR Part 1421

#### Price Support and Production Adjustment Programs

**AGENCY:** Commodity Credit Corporation, USDA.

**ACTION:** Proposed rule.

**SUMMARY:** The regulations at 7 CFR part 1421 set forth the terms and conditions of the Commodity Credit Corporation (CCC) price support programs and the Farmer-Owned Reserve (FOR) Program. The amendments made by this proposed rule would provide that only grain which is produced by a participant in CCC price support program could be offered to CCC for price support. In addition, this proposed rule would amend 7 CFR part 1421 to specify the conditions for rotating FOR loan collateral in order to ensure that CCC's interest in the loan collateral is adequately protected.

**COMMENTS:** Comments must be received on or before January 19, 1990 in order to be assured of consideration.

**ADDRESS:** Director, Cotton, Grain and Rice Price Support Division, USDA-ASCS, P.O. Box 2415, Washington, DC 20013.

**FOR FURTHER INFORMATION CONTACT:** Harold Connor, Program Specialist, Cotton, Grain and Rice Price Support Division, USDA-ASCS, P.O. Box 2415, Washington, DC 20013. Telephone: (202) 447-8223.

**SUPPLEMENTARY INFORMATION:** This proposed rule has been reviewed under United States Department of Agriculture (USDA) procedures implementing Executive Order 12291 and Departmental Regulation No. 1512-1 and has been classified as "not major." It has been determined that the provisions of this rule will not result in: (1) An annual effect on the economy of \$100 million or more; (2) major increases in costs or prices for consumers, individual

industries, Federal, State or local government agencies, or geographic regions; or (3) significant adverse effects on competition, employment, investment, productivity, innovation or on the ability of United States-based enterprises in domestic or export markets.

It has been determined that the Regulatory Flexibility Act is not applicable to this proposed rule since neither the Agricultural Stabilization and Conservation Service (ASCS) nor CCC is required by 5 U.S.C. 553 or any other provision of law to publish a notice of proposed rulemaking with respect to the subject matter of this rule.

It has been determined by an environmental evaluation that this action will have no significant impact on the quality of the human environment. Therefore, neither an Environmental Assessment nor an Environmental Impact Statement is needed.

This program/activity is not subject to the provisions of Executive Order 12372 which requires intergovernmental consultation with State and local officials. See the Notice related to 7 CFR part 3015, Subpart V, published at 48 FR 29115 (June 24, 1983).

#### Background

Historically, producers have been able to obtain price support from CCC only with respect to commodities which they produced. However, in the early to mid-1980's many producers were not able to obtain suitable storage for current year crops on their farms or at commercial warehouses near their farms due to excessively large surpluses of wheat and feed grains already in store in these facilities. These producers were often required to sell these commodities immediately upon harvest at prices below the applicable CCC price support levels. Accordingly, in order to assure producers the opportunity to obtain the full advantages of the CCC price support programs CCC allowed producers to purchase commodities and to pledge these commodities as collateral for price support loans if: (1) The producer had harvested a quantity of grain which was eligible to receive price support; (2) the purchased quantity did not exceed the harvested quantity; and (3) the producer did not obtain price support with respect to the quantity harvested by the producer. The regulations setting forth

these provisions are found at 7 CFR 1421.5(c)(3).

The storage situation currently in existence is dramatically different than in previous years as a result of the lowest supplied of wheat and feed grains in approximately 15 years. Accordingly, CCC proposes to amend these regulations to provide that purchased commodities may not be offered to CCC for price support loans or purchases. Similarly, CCC proposes to amend the regulations at 7 CFR 1421.752 to provide that purchased and prior year commodities may not be used to replace existing CCC Farmer-Owned Reserve (FOR) loan collateral.

The FOR is designed to remove surplus stocks of wheat and feed grains from market access until certain price and supply conditions exist. However, in recent years producers have had easy access to FOR loan collateral through the use of "rotation" in which existing loan collateral is replaced with purchased stocks or stocks produced by the producer. Generally, CCC has allowed producers to "rotate" their FOR collateral by selling the collateral and then replacing the grain within 60 days. During this 60-day period the producer continues to earn FOR storage payments. In order to ensure that the existence of FOR stocks does not adversely affect market prices, CCC proposes to amend 7 CFR 1421.752 to provide that the State ASC committee will establish for each county the earliest date that a producer's request to rotate FOR collateral may be approved. Producers would be allowed to deliver to a CCC-approved warehouse, sell, or feed the original loan collateral during the 60-day period following this date. Since CCC retains a security interest in the collateral, the warehouse receipt for the FOR collateral or any proceeds from the sale of the commodity must be remitted to CCC. CCC would, in turn, release these funds or the receipts to the producer after the replacement stocks are in place. Producers who did not have the replacement stocks in place on the day following the approved rotation period would be subject to liquidated damages and administrative action which are currently applicable to producers who have engaged in the unauthorized disposition of their FOR loan collateral unless the county committee, with the concurrence of a representative of the State committee,



determines that the producer has made a good faith effort to harvest such replacement grain and the producer is unable to harvest such eligible grain due to adverse weather conditions or similar conditions beyond the control of the producer as determined by CCC.

These actions would allow producers with FOR loans to rotate their stocks and thus insure enhanced quality of FOR stocks without adversely affecting market prices received by other producers.

#### List of Subjects in 7 CFR Part 1421

Grains, Loan programs/agriculture, Price support programs, Warehouses.

#### Proposed Rule

Accordingly, it is proposed that 7 CFR part 1421 be amended as follows:

#### PART 1421—[AMENDED]

1. The authority citation for 7 CFR part 1421 continues to read as follows:

Authority: 7 U.S.C. 1421, 1423, 1425, 1441, 1444-1, 1444b, 1445-2, 1445c-2, 1445e, 1446, and 1447; 15 U.S.C. 714b and 714c.

#### § 1421.3 [Amended]

2. In § 1421.3 paragraph (c) is removed and reserved.

3. Section 1421.752 is amended by revising paragraph (b) and (c) to read as follows:

#### § 1421.752 Commingling and replacement of loan collateral.

(b) *Replacement of loan collateral.* (1) A producer may replace existing Grain Reserve Program farm-stored loan collateral only as provided in this paragraph and paragraph (c) of this section. Warehouse-stored loan collateral may not be replaced. A request for approval to replace farm-stored collateral must be made by completion of Form CCC-687-1 or CCC-681 and the filing of the form with the county ASCS office which disbursed the loan. No request may be approved prior to the date established for each county by the State committee. Replacement stocks must be in place within 60 days of the date the request to rotate is approved by the county committee.

(2) Grain which is used to replace existing loan collateral must have been produced by the producer and be eligible to be pledged as collateral for a regular price support loan. Replacement loan collateral must be grain from the crop which is harvested after the date established in accordance with paragraph (b)(1). This grain must not have been purchased and must previously not have been pledged as collateral for a CCC price support loan.

With respect to wheat, such replacement stocks must be of the same class as the original loan collateral.

(3) Producers who request to replace existing Grain Reserve Program loan collateral with new stocks must have the replacement stocks in CCC-approved farm storage within the approved 60-day period. A producer may only have replacement stocks in place after this date if the producer notifies the county ASC committee prior to this date of the producer's inability to harvest such stocks and the county committee, with the concurrence of a representative of the State committee, determines that:

(i) The producer has made a good faith effort to harvest such replacement grain; and

(ii) The producer is unable to harvest such eligible grain due to adverse weather conditions, or other similar conditions beyond the control of the producer, as determined by CCC.

(4) A producer who does not have replacement stocks in place by the date specified in paragraph (b)(3) and does not meet the conditions specified in such paragraph shall pay to CCC an amount equal to the sum of:

(i) The principal of the loan plus interest at the rate in effect on the date of the failure to have such stocks in place, as provided in accordance with Part 1405 of this chapter, determined from the date of the disbursement of the loan through the date the stocks were required to be in place;

(ii) Storage payments made in accordance with the loan plus interest from the date payments were made in the manner specified in paragraph (b)(4)(i); and

(iii) Liquidated damages at the rate of 50 percent of the interest rate in the manner specified in paragraph (b)(4)(i) from the date the loan was disbursed.

(5) A producer who is unable to replace the rotated commodity because of the conditions specified in subparagraph (b)(3)(i) and (ii) shall pay to CCC an amount equal to the sum of:

(i) The principal of the loan plus interest at the rate in effect on the date of the failure to have such stocks in place, as provided in accordance with Part 1405 of this chapter, determined from the date of the disbursement of the loan through the date the stocks were required to be in place; and

(ii) Unearned storage payments.

(c) *Procedure for replacement.* (1) A producer who files a Form CCC-687-1 or CCC-681 requesting the approval to replace existing loan collateral with new stocks may after approval of the request:

(i) Feed the grain to the producer's own livestock;

(ii) Deliver the grain to a CCC-approved warehouse; or

(iii) Sell the grain.

(2) A producer who delivers grain to a CCC-approved warehouse in accordance with paragraph (c)(1) shall cause to be delivered to CCC a warehouse receipt with respect to such grain. The warehouse receipt shall show that storage charges have been paid or otherwise provided for through the final date specified to complete the rotation. CCC shall retain control of the receipt until the producer has replaced the original loan collateral with eligible replacement stocks. Except as provided in paragraph (b)(3) of this section, if the producer fails to replace the rotated stocks within the approved rotation period CCC shall retain title to such grain and shall determine the value of the grain represented by the receipt. This value shall be credited to the amount owed by the producer as determined in accordance with paragraph (b)(4) of this section.

(3) A producer who in accordance with paragraph (c)(1), sells the grain which is the collateral for the CCC grain reserve loan shall only sell such grain to the person specified in the Form CCC-681. The purchaser shall make and remit to CCC a check for the full amount of the purchase. CCC shall make these funds available to the producer upon the replacement of the original loan collateral with eligible replacement stocks if such replacement occurs prior to the final date of the approved rotation period.

Except as provided in paragraph (b)(3) of this section, if the producer has not acquired eligible replacement stocks by this date, the producer shall forfeit that sales proceeds to CCC. This amount shall be credited to the amount owed by the producer as determined in accordance with paragraph (b)(4) of this section.

(4) A producer who intends to feed such grain to the producer's own livestock, may only feed the quantity of grain which was approved by the county committee for such purposes.

(5) Any producer who files a Form CCC-687-1 or CCC-681 with the county committee shall not remove the existing loan collateral until written approval has been made by the county committee. The producer shall allow a representative of the county committee to inspect and measure, at the producer's expense, the quantity of grain to be removed and the growing crop



which will be used as replacement stocks upon harvest.

Signed at Washington, DC on December 12, 1989.

John A. Stevenson,  
Executive Vice President, Commodity Credit Corporation.

[FR Doc. 89-29570 Filed 12-19-89; 8:45 am]

BILLING CODE 3410-05

## DEPARTMENT OF THE INTERIOR

### Office of Surface Mining Reclamation and Enforcement

#### 30 CFR Part 901

#### Alabama Regulatory Program; Regulatory Reform

**AGENCY:** Office of Surface Mining Reclamation and Enforcement (OSM), Interior

**ACTION:** Proposed rule.

**SUMMARY:** OSM is announcing the receipt of proposed amendments to the Alabama regulatory program (hereinafter referred to as the Alabama program) under the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The proposed amendments cover a wide variety of topics and are primarily in response to changes in the Federal regulations (30 CFR, Chapter VII) between May 20, 1982 and June 15, 1988 (from the date of conditional approval of the Alabama program through those Federal regulation changes covered by Regulation Reform Review II). In addition, other changes are proposed by the Alabama regulatory authority.

This notice sets forth the times and locations that the Alabama program and proposed amendments to that program are available for public inspection, the comment period during which interested persons may submit written comments on the proposed amendments, and the procedures that will be followed regarding the public hearing, if one is requested.

**DATES:** Written comments must be received on or before 4 p.m. on January 19, 1990. If requested, a public hearing on the proposed amendments will be held at 1 p.m. on January 15, 1990; requests to present oral testimony at the hearing must be received on or before 4 p.m. on January 4, 1990.

**ADDRESSES:** Written comments should be mailed or hand delivered to Mr. Robert A. Penn, Director, Birmingham Field Office, at the address listed below. Copies of the Alabama program, the

proposed amendments, and all written comments received in response to this notice will be available for public review at the addresses listed below during normal business hours, Monday through Friday, excluding holidays. Each requestor may receive, free of charge, one copy of the proposed amendments by contacting OSM's Birmingham Field Office.

Office of Surface Mining Reclamation and Enforcement, Birmingham Field Office, 280 West Valley Avenue, Room 302, Homewood, Alabama 35209, Telephone: (205) 731-0690.

Alabama Surface Mining Commission, First Federal Bank Building, 2nd Floor, 1811 Second Avenue, Jasper, Alabama 35501, Telephone: (205) 221-4130.

#### FOR FURTHER INFORMATION CONTACT:

Mr. Robert A. Penn, Director, Birmingham Field Office, (205) 731-0690.

#### SUPPLEMENTARY INFORMATION:

##### I. Background

On May 20, 1982, the Secretary of the Interior conditionally approved the Alabama program. Information regarding general background on the Alabama program, including the Secretary's findings, the disposition of comments, and a detailed explanation of the conditions of approval of the Alabama program can be found in the May 20, 1982 Federal Register (47 FR 22030). Subsequent actions taken with regard to Alabama's program and program amendments can be found in 30 CFR 901.10, 901.15, and 901.30.

##### II. Discussion of Amendments

Since May 20, 1982 (the date of conditional approval of the Alabama program), a number of changes have been made to the Federal regulations concerning surface coal mining and reclamation operations. Pursuant to the Federal regulations at 30 CFR 732.17, OSM informed Alabama on May 22, 1985, June 9, 1987, and November 28, 1988 that a number of the Alabama regulations are less effective than or inconsistent with the revised Federal requirements.

By letter dated November 22, 1989 (Administrative Record No. AL-446), Alabama submitted to OSM a State program amendment package consisting of approximately 85 revisions to the Alabama program. These revisions address many of the required changes to the Alabama program that were identified in the three letters referred to above. Alabama has also proposed some additional changes which Alabama believes will further improve the Alabama program.

The Alabama Surface Mining Commission proposes the following rule making actions:

#### Rule No. and Title: (Intended Action)

- 880-X-2A-.06 Definitions. (Amend)
- 880-X-2B-.01 Applicability. (Amend)
- 880-X-6A-.06 License application requirements. (Amend)
- 880-X-7B-.07 Procedures. (Amend)
- 880-X-7D-.10 Public information. (Amend)
- 880-X-8A-.07 Coordination with requirements under other laws. (Amend)
- 880-X-8B-.06 Permit applications—general requirements for format and contents. (Amend)
- 880-X-8B-.07 Permit fees. (Amend)
- 880-X-8C-.08 Coal exploration compliance duties. (Repeal and Replace)
- 880-X-8D-.05 Identification of Interests. (Amend)
- 880-X-8D-.06 Compliance information. (Amend)
- 880-X-8D-.07 Right-of-entry information. (Amend)
- 880-X-8D-.08 Relationship to areas designated unsuitable for mining. (Amend)
- 880-X-8D-.14 Facilities or structures used in common. (New Rule)
- 880-X-8E-.05 Cultural, historical and archaeological resources information. (Amend)
- 880-X-8E-.06 Description of geology and hydrology and determination of the probable hydrologic consequences. (Repeal and Replace)
- 880-X-8E-.10 Prime farmland investigation. (Repeal and Replace)
- 880-X-8E-.11 Fish and Wildlife information. (New Rule)
- 880-X-8FA-.08 Operation plan: Permit map(s). (Amend)
- 880-X-8F-.14 Protection of public parks and historic places. (Amend)
- 880-X-8F-.18 Fish and wildlife protection and enhancement plans. (New Rule)
- 880-X-8G-.05 Identification of Interests. (Amend)
- 880-X-8G-.06 Compliance information. (Amend)
- 880-X-8G-.07 Right-of-entry information. (Amend)
- 880-X-8G-.08 Relationship to areas designated unsuitable for mining. (Amend)
- 880-X-8G-.14 Facilities or structures used in common. (New Rule)
- 880-X-8H-.05 Cultural, historical and archaeological resources information. (Amend)
- 880-X-8H-.06 Description of geology and hydrology and determination of



- the probable hydrologic consequences. (Repeal and Replace)
- 880-X-8H-10 Prime farmland investigation. (Repeal and Replace)
- 880-X-8H-11 Fish and wildlife information. (New Rule)
- 880-X-8I-07 Operation plan: Permit map(s). (Amend)
- 880-X-8I-10 Subsidence control plan. (Repeal and Replace)
- 880-X-8I-14 Protection of public parks and historic places. (Amend)
- 880-X-8I-18 Fish and Wildlife Protection and Enhancement Plan. (New Rule)
- 880-X-8J-04 Experimental Practices Mining. (Amend)
- 880-X-8J-08 Soils and Prime Farmlands. (Amend)
- 880-X-8K-05 Public Notices of Filing of Permit Applications. (Repeal)
- 880-X-8K-05 Public Participation in Permit Processing. (New Rule)
- 880-X-8K-06 Opportunity for Submission of Written Comments on Permit Applications. (Repeal)
- 880-X-8K-07 Right to File Written Objections. (Repeal)
- 880-X-8K-08 Informal Conferences. (Repeal)
- 880-X-8K-09 Public Availability of Information in Permit Applications on File with the State Regulatory Authority. (Repeal)
- 880-X-8K-10 Review of Permit Applications. (Repeal and Replace)
- 880-X-8K-11 Criteria for Permit Approval or Denial. (Repeal)
- 880-X-8K-11 Permit Conditions. (New Rule)
- 880-X-8K-12 Criteria for Permit Approval or Denial: Existing Structures. (Repeal)
- 880-X-8K-12 Permit Issuance and Right of Renewal. (New Rule)
- 880-X-8K-13 Permit Approval or Denial Actions. (Repeal)
- 880-X-8K-14 Permit Terms. (Repeal)
- 880-X-8K-15 Conditions of Permits: General and Right of Entry. (Repeal)
- 880-X-8K-16 Conditions of Permits: Environment, Public Health, and Safety. (Repeal)
- 880-X-8K-17 Improvidently Issued Permits: General Procedures. (New Rule)
- 880-X-8K-18 Improvidently Issued Permits: Recision Procedures. (New Rule)
- 880-X-8M-07 Permit Renewals: General Requirements. (Repeal)
- 880-X-8M-07 Permit Renewals: (New Rule)
- 880-X-8M-08 Permit Renewals: Applications. (Repeal)
- 880-X-8M-09 Permit Renewals: Terms. (Repeal)
- 880-X-8M-10 Permit Renewals: Approval or Denial. (Repeal)
- 880-X-8M-11 Transfer, Assignment, or Sale of Permit Rights: General Requirements. (Repeal)
- 880-X-8M-11 Transfer, Assignment, or Sale of Permit Rights. (New Rule)
- 880-X-8M-12 Transfer, Assignment, or Sale of Permit Rights: Obtaining Approval. (Repeal)
- 880-X-10B-04 General Responsibilities of Persons Conducting Other Coal Exploration. (Amend)
- 880-X-10B-05 Required Documents. (Amend)
- 880-X-10B-06 Performance Standards for Coal Exploration. (Amend)
- 880-X-10C-08 Topsoil: Removal. (Amend)
- 880-X-10C-12 Hydrologic Balance: General Requirements. (Repeal)
- 880-X-10C-12 Hydrologic-Balance Protection. (New Rule)
- 880-X-10C-14 Hydrologic-Balance: Diversions and Conveyance of Overland Flow and Shallow Ground Water Flow and Streams. (Repeal)
- 880-X-10C-14 Diversions. (New Rule)
- 880-X-10C-24 Hydrologic Balance: Transfer of Wells. (Repeal)
- 880-X-10C-26 Hydrologic Balance: Discharge of Water in an Underground Mine. (Repeal)
- 880-X-10C-28 Hydrologic Balance: Steam Buffer Zones. (Repeal and Replace)
- 880-X-10C-37 Protection of Underground Mining. (Amend)
- 880-X-10C-38 Coal Processing Waste Banks: General Requirements. (Repeal)
- 880-X-10C-38 Coal Mine Waste: General Requirements. (New Rule)
- 880-X-10C-39 Coal Processing Waste Banks: Site Inspection. (Repeal)
- 880-X-10C-40 Coal Processing Waste Banks: Water Control Measures. (Repeal)
- 880-X-10C-40 Coal Mine Waste: Refuse Piles. (New Rule)
- 880-X-10C-41 Coal Processing Waste Banks: Construction Requirements. (Repeal)
- 880-X-10C-41 Coal Mine Waste: Impounding Structures. (New Rule)
- 880-X-10C-42 Coal Processing Waste: Burning. (Repeal)
- 880-X-10C-43 Coal Processing Waste: Burned Waste Utilization. (Repeal)
- 880-X-10C-43 Coal Mine Waste: Burning and Burned Waste Utilization. (New Rule)
- 880-X-10C-44 Coal Processing Waste: Return to Underground Workings. (Repeal)
- 880-X-10C-45 Disposal of Non-coal Wastes. (Repeal)
- 880-X-10C-45 Disposal of Noncoal Mine Waste. (New Rule)
- 880-X-10C-46 Coal Processing Waste: Dams and Embankments: General Requirements. (Repeal)
- 880-X-10C-47 Coal Processing Waste: Dams and Embankments: Site Preparation. (Repeal)
- 880-X-10C-48 Coal Processing Waste: Dams and Embankments: Design and Construction. (Repeal)
- 880-X-10C-49 Protection of Fish, Wildlife, and Related Environmental Values. (Repeal and Replace)
- 880-X-10C-52 Backfilling and Grading: Timing. (Amend)
- 880-X-10C-53 Backfilling and Grading: General Grading Requirements. (Repeal)
- 880-X-10C-53 Backfilling and Grading: General Requirements. (New Rule)
- 880-X-10C-54 Backfilling and Grading: Coal and Acid and Toxic-forming Materials. (Repeal)
- 880-X-10C-55 Backfilling and Grading: Thin Overburden. (Amend)
- 880-X-10C-56 Backfilling and Grading: Thick Overburden. (Amend)
- 880-X-10C-56 Backfilling and Grading: Previously Mined Areas. (New Rule)
- 880-X-10C-58 Revegetation: General Requirements. (Repeal and Replace)
- 880-X-10C-59 Revegetation: Use of Commercial and Introduced Species. (Repeal)
- 880-X-10C-60 Revegetation: Time. (Repeal)
- 880-X-10C-60 Revegetation: Revegetation Timing and Soil Stabilization Practices. (New Rule)
- 880-X-10C-61 Revegetation: Mulching and Other Soil Stabilizing Practices. (Repeal)
- 880-X-10C-62 Revegetation: Standards for Success. (Repeal and Replace)
- 880-X-10C-63 Revegetation: Tree and Shrub Stocking for Forest Land and Land Used for Fish and Wildlife Habitats. (Repeal)
- 880-X-10D-08 Topsoil: Removal. (Amend)
- 880-X-10D-12 Hydrologic Balance: General Requirements. (Repeal)
- 880-X-10D-12 Hydrologic-Balance Protection. (New Rule)
- 880-X-10D-14 Hydrologic-Balance: Diversions and Conveyance of Overland Flow and Shallow Ground Water Flow and Streams. (Repeal)
- 880-X-10D-14 Diversions. (New Rule)
- 880-X-10D-23 Hydrologic Balance: Transfer of Wells. (Repeal)
- 880-X-10D-24 Hydrologic Balance: Discharge of Water into an Underground Mine. (Repeal)



- 880-X-10D-26 Hydrologic Balance: Stream Buffer Zones. (Repeal and Replace)
- 880-X-10D-34 Coal Processing Waste Banks: General Requirements. (Repeal)
- 880-X-10D-34 Coal Mine Waste: General Requirements. (New Rule)
- 880-X-10D-35 Coal Processing Waste Banks: Site Inspection. (Repeal)
- 880-X-10D-36 Coal Processing Waste Banks: Water Control Measures. (Repeal)
- 880-X-10D-36 Coal Mine Waste: Refuse Piles. (New Rule)
- 880-X-10D-37 Coal Processing Waste Banks: Construction Requirements. (Repeal)
- 880-X-10D-37 Coal Mine Waste: Impounding Structures. (New Rule)
- 880-X-10D-38 Coal Processing Waste: Burning. (Repeal)
- 880-X-10D-39 Coal Processing Waste: Burned Waste Utilization. (Repeal)
- 880-X-10D-39 Coal Mine Waste: Burning and Burned Waste Utilization. (New Rule)
- 880-X-10D-40 Coal Processing Waste: Return to Underground Workings. (Repeal)
- 880-X-10D-41 Disposal of Non-Coal Wastes. (Repeal)
- 880-X-10D-41 Disposal of Non-Coal Mine Wastes. (New Rules)
- 880-X-10D-42 Coal Processing Waste: Dams and Embankments: General Requirements. (Repeal)
- 880-X-10D-43 Coal Processing Waste: Dams and Embankments: Site Preparation. (Repeal)
- 880-X-10D-44 Coal Processing Waste: Dams and Embankments: Design and Construction. (Repeal)
- 880-X-10D-45 Protection of Fish, Wildlife, and Related Environmental Values. (Repeal and Replace)
- 880-X-10D-48 Backfilling and Grading: General Requirements. (Repeal and Replace)
- 880-X-10D-49 Backfilling and Grading: General Grading Requirements. (Repeal)
- 880-X-10D-49 Backfilling and Grading: Previously Mined Areas. (New Rule)
- 880-X-10D-52 Revegetation: General Requirements. (Repeal and Replace)
- 880-X-10D-53 Revegetation: Use of Commercial and Introduced Species. (Repeal)
- 880-X-10D-54 Revegetation: Timing. (Repeal)
- 880-X-10D-54 Revegetation: Revegetation Timing and Soil Stabilization Practices. (New Rule)
- 880-X-10D-55 Revegetation: Mulching and Other Soil Stabilizing Practices. (Repeal)

- 880-X-10D-56 Revegetation: Standards for Success. (Repeal and Replace)
- 880-X-10D-57 Revegetation: Tree and Shrub Stocking for Forest Land and Land Used for Fish and Wildlife Habitat. (Repeal)
- 880-X-10D-58 Subsidence Control: General Requirements. (Repeal)
- 880-X-10D-58 Subsidence Control. (New Rule)
- 880-X-10D-59 Subsidence Control: Public Notice. (Repeal and Replace)
- 880-X-10D-60 Subsidence Control: Surface Owner Protection. (Repeal)
- 880-X-10D-61 Subsidence Control: Buffer Zones. (Repeal)
- 880-X-10F-03 Auger Mining: Additional Performance Standards. (Amend)
- 880-X-10G Special Performance Standards—Operations on Prime Farmlands. (Repeal and Replace)
- 880-X-10I-06 Steep Slopes: Performance Standards. (Repeal and Replace)
- 880-X-10I-04 Steep Slopes: Multiple Seams. (Repeal)
- 880-X-11A-06 Availability of Records. (Amend)
- 880-X-11B-02 Inspections. (Amend)
- 880-X-11C-02 Cessation Orders. (Amend)
- 880-X-11D-10 Procedures for Assessment Conference. (Amend)
- 880-X-11E Individual Civil Penalties. (New Rule)

### III. Public Comment Procedures

In accordance with the provisions of 30 CFR 732.17(h), OSM is now seeking comment on whether the amendments proposed by Alabama satisfy the applicable program approval criteria of 30 CFR 732.15. If the amendments are deemed adequate, they will become part of the Alabama program.

#### Written Comments

Written comments should be specific, pertain only to the issues proposed in this rulemaking, and include explanations in support of the commenter's recommendations. Comments received after the time indicated under "DATES" or at locations other than the Birmingham Field Office will not necessarily be considered in the final rulemaking or included in the Administrative Record.

#### Public Hearing

Persons wishing to comment at the public hearing should contact the person listed under "FOR FURTHER INFORMATION CONTACT" by 4:00 p.m. on January 4, 1990. If no one requests an opportunity to comment at a

public hearing, the hearing will not be held.

Filing of a written statement at the time of the hearing is requested as it will greatly assist the transcriber. Submission of written statements in advance of the hearing will allow OSM officials to prepare adequate responses and appropriate questions.

The public hearing will continue on the specified date until all persons scheduled to comment have been heard. Persons in the audience who have not been scheduled to comment, and who wish to do so, will be heard following those scheduled. The hearing will end after all persons scheduled to comment and persons present in the audience who wish to comment have been heard.

#### Public Meeting

If only one person requests an opportunity to comment at a hearing, a public meeting, rather than a public hearing, may be held. Persons wishing to meet with OSM representatives to discuss the proposed amendments may request a meeting at the OSM office listed under "ADDRESSES" by contacting the person listed under "FOR FURTHER INFORMATION CONTACT." All such meetings will be open to the public and, if possible, notices of meetings will be posted at the locations listed under "ADDRESSES." A written summary of each meeting will be made a part of the Administrative Record.

#### List of Subjects in 30 CFR Part 901

Coal mining, Intergovernmental relations, Surface mining, Underground mining.

Dated: December 11, 1989.

Carl C. Close,

Assistant Director, Eastern Field Operations.  
[FR Doc. 89-29567 Filed 12-19-89; 8:45 am]

BILLING CODE 4310-05-M

### Office of Surface Mining Reclamation and Enforcement

#### 30 CFR Part 935

#### Ohio Permanent Regulatory Program; Filing, Applicability, and Release of Performance Bond

**AGENCY:** Office of Surface Mining Reclamation and Enforcement (OSMRE), Interior.

**ACTION:** Proposed rule.

**SUMMARY:** OSMRE is announcing the receipt of proposed Program Amendment Number 42 to the Ohio permanent regulatory program (hereinafter referred to as the Ohio



program) under the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The amendments were initiated by Ohio and are intended to clarify certain requirements for filing performance bond, to clarify the applicability of different types of bond to the permit area, and to adopt a system for release of performance bond according to the type of the bond and the order in which different types of bond were filed.

This notice sets forth the times and locations that the Ohio program and proposed amendments to that program will be available for public inspection, the comment period during which interested persons may submit written comments on the proposed amendments, and the procedures that will be followed regarding the public hearing, if one is requested.

**DATES:** Written comments must be received on or before 4:00 p.m. on January 19, 1990. If requested, a public hearing on the proposed amendments will be held at 1:00 p.m. on January 5, 1990. Requests to present oral testimony at the hearing must be received on or before 4:00 p.m. on January 4, 1990.

**ADDRESSES:** Written comments and requests to testify at the hearing should be mailed or hand-delivered to Ms. Nina Rose Hatfield, Director, Columbus Field Office, at the address listed below. Copies of the Ohio program, the proposed amendments, and all written comments received in response to this notice will be available for public review at the addresses listed below during normal business hours, Monday through Friday, excluding holidays. Each requester may receive, free of charge, one copy of the proposed amendments by contacting OSMRE's Columbus Field Office.

Office of Surface Mining Reclamation and Enforcement, Columbus Field Office, 2242 South Hamilton Road, Room 202, Columbus, Ohio 43232, Telephone: (614) 866-0578.

Ohio Department of Natural Resources, Division of Reclamation, Fountain Square, Building E-3, Columbus, Ohio 43224, Telephone: (614) 265-6875.

**FOR FURTHER INFORMATION CONTACT:** Ms. Nina Rose Hatfield, Director, Columbus Field Office, (614) 866-0578.

#### **SUPPLEMENTARY INFORMATION:**

#### **I. Background**

On August 16, 1982, the Secretary of the Interior conditionally approved the Ohio program. Information on the general background of the Ohio program submission, including the Secretary's findings, the disposition of comments,

and a detailed explanation of the conditions of approval of the Ohio program, can be found in the August 10, 1982 *Federal Register* (47 FR 34688). Subsequent actions concerning the conditions of approval and program amendments are identified at 30 CFR 935.11, 935.12, 935.15, and 935.16.

#### **II. Discussion of the Proposed Amendments**

By letter dated December 5, 1989 (Administrative Record No. OH-1243), Ohio submitted proposed Program Amendment No. 42. This proposed amendment was initiated by Ohio to clarify certain requirements for filing performance bond, to clarify the applicability of different types of bond to the permit area, and to adopt a system for release of performance bond according to the type of the bond and the order in which different types of bond were filed. The proposed amendment would revise the Ohio program at Ohio Administrative Code (OAC) section 1501:13-7-01(A) (4), (5), and (6)(a) (i) and (ii) and at OAC section 1501:13-7-05 (A)(1), (A)(2)(b), (A)(2)(b)(iv), (A)(2) (c)(ii), (B)(2)(c), and (B)(4) through (B)(4)(e).

Nonsubstantive changes are proposed throughout these two sections of the OAC to correct paragraph letter notations and to improve the clarity of the regulations.

The substantive changes proposed in Program Amendment No. 42 are discussed briefly below:

##### **(1) General Requirements and Applicability of Bonding for Coal Mining and Reclamation Operations**

OAC section 1501:13-7-01 paragraph (A)(4): This paragraph is being rewritten to specify that those areas within a permit which are bonded through the Performance Bond Fund provided for by OAC 1501:13-7-09 may be identified with that specific performance bond.

OAC section 1501:13-7-01 paragraph (A)(5): This paragraph is being rewritten to specify that all types of bonds, certificates of deposit, cash, and letters of credit shall apply to the permit area and to all revisions to the permit except for bond posted through the Performance Bond Fund provided for by OAC 1501:13-7-09. This latter type of bond shall apply only to those areas designated in accordance with OAC 1501:13-7-09(C).

OAC section 1501:13-7-01 paragraphs (A)(6)(a) (i) and (ii): These paragraphs are being rewritten to delete the requirement that permittees or applicants who elect to file incremental performance bond identify on the permit application map where mining will begin

and the direction in which mining will proceed. Also, permittees and applicants who elect to file incremental bond shall file the performance bond for the number of acres to be affected in the first permit year before the permit is issued.

##### **(2) Procedures, Criteria, and Schedule for Bond Release**

OAC 1501:13-7-05 paragraph (B)(2)(c): This paragraph is being rewritten to include the failure to achieve crop yields for prime farmland required by OAC 1501:13-9-15(F)(5)(f) as a reason to separate and individually bond a portion of the incremental area and to extend reclamation responsibility for that portion of the area.

OAC 1501:13-7-05 paragraph (B)(4): This new paragraph is being added to specify the order of release of different types of performance bond. Certificates of deposit and cash may be released in any manner determined by the Chief of the Division of Reclamation, Ohio Department of Natural Resources. Other types of performance bond shall be released in the order in which they were filed and according to the following order by type of bond:

- (1) Bond submitted through the Performance Bond Fund provided for by OAC 1501:13-9-07;
- (2) Self bond as provided for by OAC 1501:13-7-04;
- (3) Surety bond;
- (4) Letters of credit; and
- (5) Any remaining collateral bond.

#### **III. Public Comment Procedures**

In accordance with the provisions of 30 CFR 732.17(h), OSMRE is now seeking comment on whether the amendments proposed by Ohio satisfy the applicable program approval criteria of 30 CFR 732.15. If the amendments are deemed adequate, they will become part of the Ohio program.

##### **Written Comments**

Written comments should be specific, pertain only to the issues proposed in this rulemaking, and include explanations in support of the commenter's recommendations. Comments received after the time indicated under "DATES" or at locations other than the Columbus Field Office will not necessarily be considered in the final rulemaking or included in the Administrative Record.

##### **Public Hearing**

Persons wishing to comment at the public hearing should contact the person listed under "FOR MORE INFORMATION CONTACT" by 4:00 p.m. on January 4,



1990. If no one requests an opportunity to comment at a public hearing, the hearing will not be held.

Filing of a written statement at the time of the hearing is requested as it will greatly assist the transcriber.

Submission of written statements in advance of the hearing will allow OSMRE officials to prepare adequate responses and appropriate questions.

The public hearing will continue on the specified date until all persons scheduled to comment have been heard. Persons in the audience who have not been scheduled to comment and who wish to do so will be heard following

those scheduled. The hearing will end after all persons scheduled to comment and persons present in the audience who wish to comment have been heard.

#### Public Meeting

If only one person requests an opportunity to comment at a hearing, a public meeting, rather than a public hearing, may be held. Persons wishing to meet with OSMRE representatives to discuss the proposed amendments may request a meeting at the Columbus Field Office by contacting the person listed under the **"FOR FURTHER INFORMATION CONTACT."** All such meetings shall be

open to the public and, if possible, notices of the meetings will be posted at the locations listed under **"ADDRESSES."** A written summary of each public meeting will be made a part of the Administrative Record.

#### List of Subjects in 30 CFR Part 935

Coal mining, Intergovernmental relations, Surface mining, Underground mining.

Dated: December 11, 1989.

Carl C. Close,

Assistant Director, Eastern Field Operations.

[FR Doc. 89-29568 Filed 12-19-89; 8:45 am]

BILLING CODE 4310-05-M



## Notices

Federal Register

Vol. 54, No. 243

Wednesday, December 20, 1989

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

### DEPARTMENT OF AGRICULTURE

#### Forms Under Review by Office of Management and Budget

December 15, 1989.

The Department of Agriculture has submitted to OMB for review the following proposals for the collection of information under the provisions of the Paperwork Reduction Act (44 U.S.C. chapter 35) since the last list was published. This list is grouped into new proposals, revisions, extensions, or reinstatements. Each entry contains the following information:

(1) Agency proposing the information collection; (2) Title of the information collection; (3) Form number(s), if applicable; (4) How often the information is requested; (5) Who will be required or asked to report; (6) An estimate of the number of responses; (7) An estimate of the total number of hours needed to provide the information; (8) An indication of whether section 3504(h) of Public Law 96-511 applies; (9) Name and telephone number of the agency contact person.

Questions about the items in the listing should be directed to the agency person named at the end of each entry. Copies of the proposed forms and supporting documents may be obtained from: Department Clearance Officer, USDA, OIRM, Room 404-W Admin. Bldg., Washington, DC 20250, (202) 447-2118.

#### Revision

Food and Nutrition Service, WIC Quarterly Participation Report, FNS-854, Quarterly, State or local governments; 344 responses; 3,684 hours; not applicable under 3504(h). Maxine McMillian (703) 756-3710.

#### New Collection

• Food and Nutrition Service Interim Rule: Special Supplemental Food Program for Women, Infants and Children (WIC); Drug Abuse Information

and Referrals, None, Annually, Individual or households; State or local governments; 87 responses; 3,480 hours; not applicable under 3504(h), Mary Porter (703) 756-3730.

Larry K. Roberson,

Acting Departmental Clearance Officer.

[FR Doc. 89-29571 Filed 12-19-89; 8:45 am]

BILLING CODE 3410-01-M

### DEPARTMENT OF COMMERCE

#### Bureau of Export Administration

#### Semiconductor Technical Advisory Committee; Closed Meeting

A meeting of the Semiconductor Technical Advisory Committee will be held January 9, 1990, at 8 a.m., in the Herbert C. Hoover Building, Room 1617-F, 14th Street and Constitution Avenue NW., Washington, DC. The Committee advises the Office of Technology and Policy Analysis with respect to technical questions which affect the level of export controls applicable to semiconductors and related equipment or technology.

The Committee will meet only in Executive Session to discuss matters properly classified under Executive Order 12356, dealing with the U.S. and COCOM control program and strategic criteria related thereto.

The Assistant Secretary for Administration, with the concurrence of the delegate of the General Counsel, formally determined on January 10, 1988, pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, that the series of meetings or portions of meetings of the Committee and of any Subcommittees thereof, dealing with the classified materials listed in 5 U.S.C. 552b(c)(1) shall be exempt from the provisions relating to public meetings found in section 10(a)(1) and (a)(3), of the Federal Advisory Committee Act. The remaining series of meetings or portions thereof will be open to the public.

A copy of the Notice of Determination to close meetings or portions of meetings of the Committee is available for public inspection and copying in the Central Reference and Records Inspection Facility, Room 6628, U.S. Department of Commerce, Washington, DC. For further information, call Ruth D. Fitts at 202-377-4959.

Dated: December 15, 1989.

Betty A. Ferrell,

Director, Technical Advisory Committee Unit, Office of Technology and Policy Analysis.

[FR Doc. 89-29556 Filed 12-19-89; 8:45 am]

BILLING CODE 3510-DT-M

### COMMITTEE FOR THE IMPLEMENTATION OF TEXTILE AGREEMENTS

#### Announcement of Import Limits for Certain Cotton, Wool, Man-Made Fiber, Silk Blend and Other Vegetable Fiber Textiles and Textile Products Produced or Manufactured in the People's Republic of China

December 14, 1989.

**AGENCY:** Committee for the Implementation of Textile Agreements (CITA).

**ACTION:** Issuing a directive to the Commissioner of Customs establishing limits for the new agreement year.

**EFFECTIVE DATE:** January 1, 1990.

**FOR FURTHER INFORMATION CONTACT:** Jerome Turtola, International Trade Specialist, Office of Textiles and Apparel, U.S. Department of Commerce, (202) 377-4212. For information on the quota status of these limits, refer to the Quota Status Reports posted on the bulletin boards of each Customs port or call (202) 566-6828. For information on embargoes and quota re-openings, call (202) 377-3715.

#### SUPPLEMENTARY INFORMATION:

**Authority.** Executive Order 11651 of March 3, 1973, as amended; Section 204 of the Agricultural Act of 1956, as amended (7 U.S.C. 1854).

The Bilateral Cotton, Wool, Man-Made Fiber, Silk Blend and Other Vegetable Fiber Textile Agreement of February 2, 1988 between the Governments of the United States and the People's Republic of China establishes limits for the 1990 agreement year. The limits for Categories 239, 347/348, 445/446, 611, 643, 845 and 847 and the limits for Groups II and III are being reduced for carryforward used in 1989. The limits for Categories 330/630, 369-S, 633, 643 and 863-S are subject to change pending consultations with the Government of the People's Republic of China.



A copy of the agreement is available from the Textiles Division, Bureau of Economic and Business Affairs, U.S. Department of State, (202) 647-1998.

A description of the textile and apparel categories in terms of HTS numbers is available in the CORRELATION: Textile and Apparel Categories with the Harmonized Tariff Schedule of the United States (see Federal Register notice 54 FR 50797, published on December 11, 1989).

The letter to the Commissioner of Customs and the actions taken pursuant to it are not designed to implement all of the provisions of the bilateral agreement, but are designed to assist only in the implementation of certain of its provisions.

Dated: December 14, 1989.

Auggie D. Tantillo,

Chairman, Committee for the Implementation of Textile Agreements.

#### Committee for the Implementation of Textile Agreements

December 14, 1989

Commissioner of Customs, Department of the Treasury, Washington, D.C. 20229.

Dear Commissioner: Under the terms of Section 204 of the Agricultural Act of 1956, as amended (7 U.S.C. 1854), and the Arrangement Regarding International Trade in Textiles done at Geneva on December 20, 1973, as further extended on July 31, 1986; pursuant to the Bilateral Cotton, Wool, Man-Made Fiber, Silk Blend and Other Vegetable Fiber Textile Agreement of February 2, 1988 between the Governments of the United States and the People's Republic of China; and in accordance with the provisions of Executive Order 11651 of March 3, 1972, as amended, you are directed to prohibit, effective on January 1, 1990, entry into the United States for consumption and withdrawal from warehouse for consumption of cotton, wool, man-made fiber, silk blend and other vegetable fiber textiles and textile products in the following categories, produced or manufactured in China and exported during the twelve-month period beginning on January 1, 1990 and extending through December 31, 1990, in excess of the following levels of restraints:

Category	12-month restraint limit
<i>Levels Not Subject to a Group</i>	
200.....	549,478 kilograms.
218.....	9,719,666 square meters.
219.....	1,964,367 square meters.
226.....	8,919,658 square meters.
237.....	1,456,609 dozen.
239.....	2,359,361 kilograms.
300/301.....	3,335,888 kilograms.
313.....	36,610,103 square meters.
314.....	41,413,162 square meters.
315.....	146,037,719 square meters.

Category	12-month restraint limit
317/326.....	16,544,264 square meters of which not more than 3,165,244 square meters shall be in Category 326.
331.....	4,318,810 dozen pairs.
333.....	73,868 dozen.
334.....	263,586 dozen.
335.....	342,787 dozen.
336.....	137,917 dozen.
338/339.....	2,116,741 dozen of which not more than 1,606,837 dozen shall be in knit shirts other than T-shirts and tank tops in Categories 338-S/339-S. <sup>1</sup>
340.....	751,408 dozen of which not more than 375,704 dozen shall be in shirts made from fabric with two or more colors in the warp and/or the filling, excluding napped shirts in Category 340-Z. <sup>2</sup>
341.....	591,799 dozen of which not more than 355,079 dozen shall be in blouses made from fabric with two or more colors in the warp and/or the filling in Category 341-Y. <sup>3</sup>
342.....	233,239 dozen.
345.....	113,568 dozen.
347/348.....	2,127,980 dozen.
350.....	125,685 dozen.
351.....	407,925 dozen.
352.....	1,562,688 dozen.
359-C. <sup>4</sup> .....	458,328 kilograms.
359-V. <sup>5</sup> .....	717,012 kilograms.
360.....	6,190,298 numbers of which not more than 4,222,382 numbers shall be in Category 360-P. <sup>6</sup>
361.....	3,445,060 numbers.
363.....	26,245,012 numbers.
369-D. <sup>7</sup> .....	4,058,491 kilograms.
369-H. <sup>8</sup> .....	4,006,545 kilograms.
369-L. <sup>9</sup> .....	2,500,429 kilograms.
369-S. <sup>10</sup> .....	564,333 kilograms.
410.....	1,863,660 square meters of which not more than 1,493,923 square meters shall be in Category 410-A. <sup>11</sup> and not more than 1,493,923 square meters shall be in Category 410-B. <sup>12</sup>
433.....	21,932 dozen.
434.....	12,496 dozen.
435.....	22,952 dozen.
436.....	14,281 dozen.
438.....	24,992 dozen.
440.....	35,704 dozen of which not more than 20,402 dozen shall be in men's shirts in Category 440-M. <sup>13</sup>
442.....	39,784 dozen.
443.....	128,533 numbers.
444.....	191,084 numbers.
445/446.....	267,246 dozen.
447.....	74,279 dozen.
449.....	20,880 dozen.
607.....	2,648,689 kilograms.
611.....	4,392,177 square meters.
613.....	6,209,333 square meters.
614.....	9,757,523 square meters.

Category	12-month restraint limit
615.....	20,313,398 square meters.
617.....	14,192,760 square meters.
631.....	960,062 dozen pairs.
634.....	504,547 dozen.
635.....	527,043 dozen.
636.....	442,682 dozen.
638/639.....	2,184,840 dozen.
640.....	1,310,412 dozen.
641.....	1,138,925 dozen.
642.....	273,163 dozen.
645/646.....	758,551 dozen.
647.....	1,315,516 dozen.
648.....	953,615 dozen.
649.....	734,408 dozen.
650.....	95,601 dozen.
651.....	620,270 dozen of which not more than 109,203 dozen shall be in Category 651-B. <sup>14</sup>
652.....	2,105,675 dozen.
659-C. <sup>15</sup> .....	344,940 kilograms.
659-H. <sup>16</sup> .....	2,281,747 kilograms.
659-S. <sup>17</sup> .....	512,893 kilograms.
669-P. <sup>18</sup> .....	1,513,679 kilograms.
670-L. <sup>19</sup> .....	12,755,743 kilograms.
831.....	411,761 dozen pairs.
833.....	22,174 dozen.
835.....	102,950 dozen.
840.....	400,480 dozen.
842.....	221,744 dozen.
845.....	2,197,658 dozen.
846.....	148,526 dozen.
847.....	1,048,667 dozen.
863-S. <sup>20</sup> .....	7,093,349 numbers.
<i>Group II</i>	
330, 332, 349, 353, 354, 359-0. <sup>21</sup> 431, 432, 439, 459, 630, 632, 633, 643, 644, 653, 654 and 659-0. <sup>22</sup> as a group.	105,906,651 square meters equivalent.
<i>Sublevels in Group II</i>	
330/630.....	4,912,250 dozen.
633.....	38,451 dozen.
643.....	424,522 numbers.
<i>Group III</i>	
201, 220, 222-225, 227, 229, 362, 369-0. <sup>23</sup> 400, 414, 464-469, 600, 603, 604-0. <sup>24</sup> 606, 618-622, 624-629, 655, 666, 669-0. <sup>25</sup> and 670-0. <sup>26</sup> as a group.	284,435,819 square meters equivalent.
<i>Group IV</i>	
832, 834, 836, 838, 839, 843, 844, 850-852, 858 and 859, as a group.	22,547,345 square meters equivalent.
<i>Sublevel in Group IV</i>	
836.....	211,000 dozen.

<sup>1</sup> In Categories 338-S/339-S, all HTS numbers except 6109.10.0012, 6109.10.0014, 6109.10.0018, 6109.10.0023, 6109.10.0040, 6109.10.0045, 6109.10.0060 and 6109.10.0065.

<sup>2</sup> In Category 340-Z, only HTS numbers 6205.20.2015, 6205.20.2020, 6205.20.2050 and 6205.20.2060.

<sup>3</sup> In Category 341-Y, only HTS numbers 6204.22.3060, 6204.22.3010 and 6204.22.3030.

<sup>4</sup> In Category 359-C, only HTS numbers 6103.42.2025, 6103.49.3034, 6104.62.1020, 6104.69.3010, 6114.20.0048, 6114.20.0052, 6203.42.2010, 6203.42.2090, 6204.62.2010, 6211.32.0010, 6211.32.0025 and 6211.42.0010.

<sup>5</sup> In Category 359-V, only HTS numbers 6103.19.2060, 6103.19.4030, 6104.12.0040, 6104.19.2040, 6110.20.1022, 6110.20.1024, 6110.20.2030, 6110.20.2035, 6110.90.0044, 6110.90.0048, 6201.92.2010, 6202.92.2020.



6203.19.1030, 6203.19.4030, 6204.12.0040,  
6204.19.3040, 6211.32.0070 and 6211.42.0070.

\* In Category 360-P, only HTS numbers  
6302.21.1010, 6302.21.1020, 6302.21.2010,  
6302.21.2020, 6302.31.1010, 6302.31.1020,  
6302.31.2010 and 6302.31.2020.

\* In Category 369-D, only HTS numbers  
6302.60.0010, 6302.91.0005 and 6302.91.0045.

\* In Category 369-H, only HTS numbers  
4202.22.4020, 4202.22.4500 and 4202.22.8030.

\* In Category 369-L, only HTS numbers  
4202.12.4000, 4202.12.8020, 4202.12.8060,  
4202.92.1500, 4202.92.3015 and 4202.92.8000.

\* In Category 369-S, only HTS numbers  
6307.10.2005.

\* In Category 410-A, only HTS numbers  
5111.11.1000, 5111.11.6030, 5111.11.6060,  
5111.19.2000, 5111.19.6020, 5111.19.6040,  
5111.19.6060, 5111.19.6080, 5111.20.6000,  
5111.30.6000, 5111.90.3000, 5111.90.6000,  
5212.11.1010, 5212.12.1010, 5212.13.1010,  
5212.14.1010, 5212.15.1010, 5212.21.1010,  
5212.22.1010, 5212.23.1010, 5212.24.1010,  
5212.25.1010, 5311.00.2000, 5407.91.0510,  
5407.92.0510, 5407.93.0510, 5407.94.0510,  
5408.31.0510, 5408.32.0510, 5408.33.0510,  
5408.34.0510, 5515.13.0510, 5515.22.0510,  
5515.92.0510, 5516.31.0510, 5516.32.0510,  
5516.33.0510, 5516.34.0510 and 6301.20.0020.

\* In Category 410-B, only HTS numbers  
5007.10.6030, 5007.90.6030, 5112.11.0030,  
5112.11.0060, 5112.19.6010, 5112.19.6020,  
5112.19.6030, 5112.19.6040, 5112.19.6050,  
5112.19.6060, 5112.20.0000, 5112.30.0000,  
5112.90.3000, 5112.90.6010, 5112.90.6090,  
5212.11.1020, 5212.12.1020, 5212.13.1020,  
5212.14.1020, 5212.15.1020, 5212.21.1020,  
5212.22.1020, 5212.23.1020, 5212.24.1020,  
5212.25.1020, 5309.21.2000, 5309.29.2000,  
5407.91.0520, 5407.92.0520, 5407.93.0520,  
5407.94.0520, 5408.31.0520, 5408.32.0520,  
5408.33.0520, 5408.34.0520, 5515.13.0520,  
5515.22.0520, 5515.92.0520, 5516.31.0520,  
5516.32.0520, 5516.33.0520 and 5516.34.0520.

\* In Category 440-M, only HTS numbers  
6203.21.0030, 6203.23.0030, 6205.10.1000,  
6205.10.2010, 6205.10.2020, 6205.30.1510,  
6205.30.1520, 6205.90.2020, 6205.90.4020 and  
6211.31.0030.

\* In Category 651-B, only HTS numbers  
6107.22.0015 and 6108.32.0015.

\* In Category 659-C, only HTS numbers  
6103.23.0055, 6103.43.2020, 6103.49.2000,  
6103.49.3038, 6104.63.1020, 6104.69.1000,  
6104.69.3014, 6114.30.3040, 6114.30.3050,  
6203.43.2010, 6203.43.2090, 6203.49.1010,  
6203.49.1090, 6204.63.1510, 6204.69.1010,  
6210.10.4015, 6211.33.0010, 6211.33.0017 and  
6211.43.0010.

\* In Category 659-H, only HTS numbers  
6502.00.9030, 6504.00.9015, 6504.00.9060,  
6505.90.5060, 6505.90.6060, 6505.90.7060 and  
6505.90.8060.

\* In Category 659-S, only HTS numbers  
6112.31.0010, 6112.31.0020, 6112.41.0010,  
6112.41.0020, 6112.41.0030, 6112.41.0040,  
6211.11.1010, 6211.11.1020, 6211.12.1010 and  
6211.12.1020.

\* In Category 669-P, only HTS numbers  
6305.31.0010, 6305.31.0020 and 6305.39.0000.

\* In Category 670-L, only HTS numbers  
4202.12.8030, 4202.12.8070, 4202.92.3020,  
4202.92.3030 and 4202.92.9020.

\* In Category 863-S, only HTS numbers  
6307.10.2015.

\* In Category 359-O, all HTS numbers except  
6103.42.2025, 6103.49.3034, 6104.62.1020,  
6104.69.3010, 6114.20.0048, 6114.20.0052,  
6203.42.2010, 6203.42.2090, 6204.62.2010,  
6211.32.0010, 6211.32.0025 and 6211.42.0010 in  
Category 359-C; and 6103.19.2030, 6103.19.4030,  
6104.12.0040, 6104.19.2040, 6110.20.1022,  
6110.20.1024, 6110.20.2030, 6110.20.2035,  
6110.90.0044, 6110.90.0046, 6201.92.2010,  
6202.92.2020, 6203.19.1030, 6203.19.4030,  
6204.12.0040, 6204.19.3040, 6211.32.0070 and  
6211.42.0070 in Category 359-V.

\* In Category 659-O, all HTS numbers except  
6103.23.0055, 6103.43.2020, 6103.49.2000,  
6103.49.3038, 6104.63.1020, 6104.69.1000,  
6104.69.3014, 6114.30.3040, 6114.30.3050,  
6203.43.2010, 6203.43.2090, 6203.49.1010,  
6203.49.1090, 6204.63.1510, 6204.69.1010,  
6210.10.4015, 6211.33.0010, 6211.33.0017 and  
6211.43.0010 in Category 659-C; 6502.00.9030,  
6504.00.9015, 6504.00.9060, 6505.90.5060,

6505.90.6060, 6505.90.7060 and 6505.90.8060 in  
Category 659-H; and 6112.31.0010, 6112.31.0020,  
6112.41.0010, 6112.41.0020, 6112.41.0030,  
6112.41.0040, 6211.11.1010, 6211.11.1020,  
6211.12.1010 and 6211.12.1020 in Category 659-S.

\* In Category 369-O, all HTS numbers except  
6302.60.0010, 6302.91.0005 and 6302.91.0045 in  
Category 369-D; 4202.22.4020, 4202.22.4500 and  
4202.22.8030 in Category 369-H; 4202.12.4000,  
4202.12.8020, 4202.12.8060, 4202.92.1500,  
4202.92.3015 and 4202.92.8000 in Category 369-L;  
and 6307.10.2005 in Category 369-S.

\* In Category 604-O, all HTS numbers except  
5509.32.0000.

\* In Category 669-O, all HTS numbers except  
6305.31.0010, 6305.31.0020 and 6305.39.0000 in  
Category 669-P.

\* In Category 670-O, only HTS numbers  
4202.22.4030, 4202.22.8050 and 4202.32.9550.

Imports charged to these limits for the  
period January 1, 1989 through December 31,  
1989, including the period April 28, 1989  
through December 31, 1989 (Categories 369-S  
and 863-S), shall be charged against the  
levels of restraint to the extent of any unfilled  
balances. In the event the limits established  
for these periods have been exhausted by  
previous entries, such goods shall be subject  
to the levels set forth in this directive.

You are directed to charge 5,000 dozen to  
the limit established in this directive for  
Category 237 for overshipments of a previous  
unilateral restraint limit for Category 637.  
These charges are the result of an agreement  
in 1987 between the Governments of the  
United States and the People's Republic of  
China.

In carrying out the above directions, the  
Commissioner of Customs should construe  
entry into the United States for consumption  
to include entry for consumption into the  
Commonwealth of Puerto Rico.

The Committee for the Implementation of  
Textile Agreements has determined that  
these actions fall within the foreign affairs  
exception to the rulemaking provisions of 5  
U.S.C. 553(a)(1).

Sincerely,

Auggie D. Tantillo,

Chairman, Committee for the Implementation  
of Textile Agreements.

[FR Doc. 89-29558 Filed 12-19-89; 8:45 am]

BILLING CODE 3510-DR-M

## DEPARTMENT OF DEFENSE

### Department of the Navy

#### CNO Executive Panel Advisory Committee; Closed Meeting

Pursuant to the provisions of the  
Federal Advisory Committee Act (5  
U.S.C. App. 2), notice is hereby given  
that the Chief of Naval Operations  
(CNO) Executive Panel Advisory  
Committee Technology Surprise Task  
Force will meet January 4, 1990 from 9  
a.m. to 5 p.m., at 4401 Ford Avenue,  
Alexandria, Virginia. This session will  
be closed to the public.

The purpose of this meeting is to  
discuss the possibility of unexpected  
technological breakthroughs that vastly

change warfighting capabilities. The  
entire agenda of the meeting will consist  
of discussions of key issues regarding  
the potential for unexpected technology  
breakthroughs that could have an acute  
impact on naval and other military  
forces. These matters constitute  
classified information that is specifically  
authorized by Executive Order to be  
kept secret in the interest of national  
defense and is, in fact, properly  
classified pursuant to such Executive  
Order. Accordingly, the Secretary of the  
Navy has determined in writing that the  
public interest requires that all sessions  
of the meeting be closed to the public  
because they will be concerned with  
matters listed in section 552(c)(1) of title  
5, United States Code.

For further information concerning  
this meeting, contact: Faye Buckman,  
Secretary to the CNO Executive Panel  
Advisory Committee, 4401 Ford Avenue,  
Room 601, Alexandria, Virginia 22302-  
0268, Phone (703) 756-1205.

Dated: December 14, 1989.

Sandra M. Kay,

Department of the Navy, Alternate Federal  
Register, Liaison Officer.

[FR Doc. 89-29490 Filed 12-19-89; 8:45 am]

BILLING CODE 3810-AE

## DEPARTMENT OF DEFENSE

### GENERAL SERVICES ADMINISTRATION

#### NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

#### Federal Acquisition Regulation (FAR); Information Collection Under OMB Review

AGENCIES: Department of Defense  
(DOD), General Services Administration  
(GSA), and National Aeronautics and  
Space Administration (NASA).

ACTION: Notice.

SUMMARY: Under the provisions of the  
Paperwork Reduction Act of 1980 (44  
U.S.C. chapter 35), the Federal  
Acquisition Regulation (FAR)  
Secretariat has submitted to the Office  
of Management and Budget (OMB) a  
request to review and approve a  
revision of a currently approved  
information collection regarding  
Contractor Use of Government Supply  
Sources.

ADDRESS: Send comments to Ms.  
Eyvette Flynn, FAR Desk Officer, OMB,  
Room 3235, NEOB, Washington, DC  
20503.



**FOR FURTHER INFORMATION CONTACT:**

Ms. Linda Klein, Office of Federal Acquisition Policy, GSA, (202) 523-3775 or Mr. Owen Green, Defense Acquisition Regulatory Council, (703) 697-7268.

**SUPPLEMENTARY INFORMATION:**

a. *Purpose.* When it is in the best interest of the Government and when supplies and services are required by a Government contract, contracting officers may authorize contractors to use Government supply sources in performing certain contracts.

Contractors placing orders under Federal Supply Schedules or Personal Property Rehabilitation Price Schedules must follow the terms of the applicable schedule. To place orders, firms will submit the initial FEDSTRIP or MILSTRIP requisitions or the Optional Form 347, a copy of the authorization to order, and a statement regarding authorization to the firm holding the schedule contract.

The information informs the schedule contractor that the ordering contractor is authorized to use this Government supply source and fills the ordering contractor's order under the terms of the Government contract.

b. *Annual reporting burden.* The annual reporting burden is estimated as follows: Respondents, 300; response per respondent, 7; total annual responses, 2100; hours per response, .25; and total response burden hours, 525.

Obtaining Copies of Proposals: Requester may obtain copies from General Services Administration, FAR Secretariat (VRS), Room 4041, Washington, DC 20405, telephone (202) 523-4755. Please cite OMB Control No. 9000-0031, Contractor Use of Government Supply Sources.

Dated: December 15, 1989.

Margaret A. Willis,

FAR Secretariat.

[FR Doc. 89-29592 Filed 12-19-89; 8:45 am]

BILLING CODE 6820-JC-M

**Federal Acquisition Regulation (FAR);  
Information Collection Under OMB  
Review**

**AGENCIES:** Department of Defense (DOD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

**ACTION:** Notice.

**SUMMARY:** Under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. chapter 35), the Federal Acquisition Regulation (FAR)

Secretariat has submitted to the Office of Management and Budget (OMB) a request to review and approve a revision of a currently approved information collection regarding Contractor Use of Interagency Motor Pool Vehicles.

**ADDRESS:** Send comments to Ms. Eyvette Flynn, FAR Desk Officer, OMB, room 3235, NEOB, Washington, DC 20503.

**FOR FURTHER INFORMATION CONTACT:**

Ms. Linda Klein, Office of Federal Acquisition Policy, GSA (202) 523-3775 or Mr. Owen Green, Defense Acquisition Regulatory Council, (703) 697-7268.

**SUPPLEMENTARY INFORMATION:**

a. *Purpose.* If it is the best interest of the Government, the contracting officer may authorize cost-reimbursement contractors to obtain, for official purposes only, interagency motor pool vehicles and related services. Contractor's requests for vehicles must contain two copies of the agency authorization, the number of vehicles and related services required and period of use, a list of employees who are authorized to request the vehicles, a listing of equipment authorized to be serviced, and billing instructions and address.

A written statement that the contractor will assume, without the right of reimbursement from the Government, the cost or expense of any use of the motor pool vehicles and services not related to the performance of the contract is necessary before the contracting officer may authorize cost-reimbursement contractors to obtain interagency motor pool vehicles and related services. The information is used by the Government to determine that it is in the Government's best interest to authorize a cost-reimbursement contractor to obtain, for official purposes only, interagency motor pool vehicles and related services, and to provide those vehicles.

b. *Annual reporting burden.* The annual reporting burden is estimated as follows: Respondents, 70; responses per respondent, 2; total annual responses, 140; hours per response, .5; and total response burden hours, 70.

Obtaining Copies of Proposals: Requester may obtain copies from General Services Administration, FAR Secretariat (VRS), room 4041, Washington, DC 20405, telephone (202) 523-4755. Please cite OMB Control No. 9000-0032, Contractor Use of

Interagency Motor Pool Vehicles.

Dated: December 15, 1989.

Margaret A. Willis,

FAR Secretariat.

[FR Doc. 89-29593 Filed 12-19-89; 8:45 am]

BILLING CODE 6820-JC-M

**Federal Acquisition Regulation (FAR);  
Information Collection Under OMB  
Review**

**AGENCIES:** Department of Defense (DOD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

**ACTION:** Notice.

**SUMMARY:** Under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. chapter 35), the Federal Acquisition Regulation (FAR) Secretariat has submitted to the Office of Management and Budget (OMB) a request to review and approve a revision of a currently approved information collection regarding Claims and Appeals.

**ADDRESS:** Send comments to Ms. Eyvette Flynn, FAR Desk Officer, OMB, room 3235, NEOB, Washington, DC 20503.

**FOR FURTHER INFORMATION CONTACT:**

Ms. Linda Klein, Office of Federal Acquisition Policy, GSA (202) 523-3775 or Mr. Owen Green, Defense Acquisition Regulatory Council, (703) 697-7268.

**SUPPLEMENTARY INFORMATION:**

a. *Purpose.* It is the Government's policy to try to resolve all contractual issues by mutual agreement at the contracting officer's level without litigation. Contractor's claims must be submitted in writing to the contracting officer for a decision.

Claims exceeding \$50,000 must be accompanied by a certification that (1) the claim is made in good faith; (2) supporting data are accurate and complete; and (3) the amount requested accurately reflects the contract adjustment for which the contractor believes the Government is liable. Contractors may appeal the contracting officer's decision by submitting written appeals to the appropriate officials.

The information is to decide the claim.

b. *Annual reporting burden.* The annual reporting burden is estimated as follows: Respondents, 7,500; responses per respondent, 20; total annual responses, 150,000; hours per response, 1; and total response burden hours, 150,000.



Obtaining copies of proposals: Requester may obtain copies from General Services Administration, FAR Secretariat (VRS), Room 4041, Washington, DC 20405, telephone (202) 523-4755. Please cite OMB Control No. 9000-0035, Claims and Appeals.

Dated: December 14, 1989.

Margaret A. Willis,  
FAR Secretariat.

[FR Doc. 89-29594 Filed 12-19-89; 8:45 am]

BILLING CODE 6820-JC-M

#### **Federal Acquisition Regulation (FAR); Information Collection Under OMB Review**

**AGENCIES:** Department of Defense (DOD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

**ACTION:** Notice.

**SUMMARY:** Under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. chapter 35), the Federal Acquisition Regulation (FAR) Secretariat has submitted to the Office of Management and Budget (OMB) a request to review and approve a revision of a currently approved information collection pertaining to Permits, Authorities, or Franchises Certification.

**ADDRESS:** Send comments to Ms. Eyvette Flynn, FAR Desk Officer, OMB, room 3235, NEOB, Washington, DC 20503.

**FOR FURTHER INFORMATION CONTACT:** Ms. Linda Klein, Office of Federal Acquisition Policy, (202) 523-3775 or Mr. Owen Green, Defense Acquisition Regulatory Council, (703) 697-7268.

#### **SUPPLEMENTARY INFORMATION:**

a. *Purpose.* This certification and copies of authorizations are needed to determine that the offeror has obtained all authorizations, permits, etc., required in connection with transporting the material involved.

The contracting officer reviews the certification and any documents requested to ensure that the offeror has complied with all regulatory requirements and has obtained any permits, licenses, etc., that are needed.

b. *Annual reporting burden.* The annual reporting burden is estimated as follows: Respondents, 1,106; responses per respondent, 3; total annual responses, 3,318; hours per response, .094; and total response burden hours, 312.

Obtaining Copies of Proposals: Requester may obtain copies from General Services Administration, FAR Secretariat (VRS), Room 4041, Washington, DC 20405, telephone (202) 523-4755. Please cite OMB Control No. 9000-0053, Permits, Authorities, or Franchises Certification.

Dated: December 15, 1989.

Margaret A. Willis,  
FAR Secretariat.

[FR Doc. 89-29595 Filed 12-19-89; 8:45 am]

BILLING CODE 6820-JC-M

#### **Federal Acquisition Regulation (FAR); Information Collection Under OMB Review**

**AGENCIES:** Department of Defense (DOD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

**ACTION:** Notice.

**SUMMARY:** Under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. chapter 35), the Federal Acquisition Regulation (FAR) Secretariat has submitted to the Office of Management and Budget (OMB) a request to review and approve a revision of a currently approved information collection pertaining to U.S.-Flag Air Carriers Certification.

**ADDRESS:** Send comments to Ms. Eyvette Flynn, FAR Desk Officer, OMB, room 3235, NEOB, Washington, DC 20503.

**FOR FURTHER INFORMATION CONTACT:** Ms. Linda Klein, Office of Federal Acquisition Policy, (202) 523-3775 or Mr. Owen Green, Defense Acquisition Regulatory Council, (703) 697-7268.

#### **SUPPLEMENTARY INFORMATION:**

a. *Purpose.* Section 5 of the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. 1517) (Fly America Act) requires that all Federal agencies and Government contractors and subcontractors use U.S.-flag air carriers for U.S. Government-financed international air transportation of personnel (and their personal effects) or property, to the extent that service by those carriers is available. It requires the Comptroller General of the United States, in the absence of satisfactory proof of the necessity for foreign-flag air transportation, to disallow expenditures from funds, appropriated or otherwise established for the account of the United States, for international air

transportation secured aboard a foreign-flag air carrier if a U.S.-flag carrier is available to provide such services. In the event that the contractor selects a carrier other than a U.S.-flag air carrier for international air transportation, the contractor shall include a certification on vouchers involving such transportation.

The contracting officer uses the information furnished in the certification to determine whether adequate justification exists for the contractor's use of other than a U.S.-flag air carrier.

b. *Annual reporting burden.* The annual reporting burden is estimated as follows: Respondents, 150; responses per respondent, 2; total annual responses, 300; hours per response, .25; and total response burden hours, 75.

Obtaining Copies of Proposals: Requester may obtain copies from General Services Administration, FAR Secretariat (VRS), room 4041, Washington, DC 20405, telephone (202) 523-4755. Please cite OMB Control No. 9000-0054, U.S.-Flag Air Carriers Certification.

Dated: December 15, 1989.

Margaret A. Willis,  
FAR Secretariat.

[FR Doc. 89-29596 Filed 12-19-89; 8:45 am]

BILLING CODE 6820-JC-M

#### **Federal Acquisition Regulation (FAR); Information Collection Under OMB Review**

**AGENCY:** Department of Defense (DOD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

**ACTION:** Notice.

**SUMMARY:** Under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. chapter 35), the Federal Acquisition Regulation (FAR) Secretariat has submitted to the Office of Management and Budget (OMB) a request to review and approve a revision of a currently approved information collection pertaining to Freight Classification Description.

**ADDRESS:** Send comments to Ms. Eyvette Flynn, FAR Desk Officer, OMB, room 3235, NEOB, Washington, DC 20503.

**FOR FURTHER INFORMATION CONTACT:** Ms. Linda Klein, Office of Federal Acquisition Policy, GSA (202) 523-3775 or Mr. Owen Green, Defense Acquisition Regulatory Council, (703) 697-7268.



**SUPPLEMENTARY INFORMATION:**

a. *Purpose.* When the Government purchases supplies that are new to the supply system, nonstandard, or modifications of previously shipped items, and different freight classifications may apply, offerors are requested to indicate the full Uniform Freight Classification or National Motor Freight Classification. The information is used to determine the proper freight rate for the supplies.

b. *Annual reporting burden.* The annual reporting burden is estimated as follows: Respondents, 2,640; responses per respondent, 3; total annual responses, 7,920; hours per response, .167; and total response burden hours, 1,323.

*Obtaining Copies of Proposals:* Requester may obtain copies from General Services Administration, FAR Secretariat (VRS), room 4041, Washington, DC 20405, telephone (202) 523-4755. Please cite OMB Control No. 9000-0055, Freight Classification Description.

Dated: December 15, 1989.

Margaret A. Willis,  
FAR Secretariat.

[FR Doc. 89-29597 Filed 12-19-89; 8:45 am]

BILLING CODE 6820-JC-M

### **Federal Acquisition Regulation (FAR); Information Collection Under OMB Review**

**AGENCIES:** Department of Defense (DOD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

**ACTION:** Notice.

**SUMMARY:** Under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. chapter 35), the Federal Acquisition Regulation (FAR) Secretariat has submitted to the Office of Management and Budget (OMB) a request to review and approve a revision of a currently approved information collection pertaining to Report of Shipment.

**ADDRESS:** Send comments to Ms. Eyvette Flynn, FAR Desk Officer, OMB, Room 3235, NEOB, Washington, DC 20503.

**FOR FURTHER INFORMATION CONTACT:** Ms. Linda Klein, Office of Federal Acquisition Policy, GSA, (202) 523-3775 or Mr. Owen Green, Defense Acquisition Regulatory Council, (703) 697-7268.

**SUPPLEMENTARY INFORMATION:**

a. *Purpose.* Military (and, as required, civilian agency) storage and distribution points, depots, and other receiving activities require advance notice of large shipments enroute from contractor's plants. Timely receipt of notices by the consignee transportation office precludes the incurring of demurrage and vehicle detention charges.

The information is used to alert the receiving activity of the arrival of a large shipment.

b. *Annual reporting burden.* The annual reporting burden is estimated as follows: Respondents, 250; responses per respondent, 4; total annual responses, 1,000; Hours per response, .167; and total response burden hours, 167.

*Obtaining Copies of Proposals:* Requester may obtain copies from General Services Administration, FAR Secretariat (VRS), Room 4041, Washington, DC 20405, telephone (202) 523-4755. Please cite OMB Control No. 9000-0056, Report of Shipment.

Dated: December 14, 1989

Margaret A. Willis,  
FAR Secretariat.

[FR Doc. 89-29598 Filed 12-19-89; 8:45 am]

BILLING CODE 6820-JC-M

### **Federal Acquisition Regulation (FAR); Information Collection Under OMB Review**

**AGENCIES:** Department of Defense (DOD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

**ACTION:** Notice.

**SUMMARY:** Under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. chapter 35), the Federal Acquisition Regulation (FAR) Secretariat has submitted to the Office of Management and Budget (OMB) a request to review and approve a revision of a currently approved information collection regarding Evaluation of Export Offers.

**ADDRESS:** Send comments to Ms. Eyvette Flynn, FAR Desk Officer, OMB, Room 3235, NEOB, Washington, DC 20503.

**FOR FURTHER INFORMATION CONTACT:** Ms. Linda Klein, Office of Federal Acquisition Policy, GSA, (202) 523-3775 or Mr. Owen Green, Defense Acquisition Regulatory Council, (703) 697-7268.

**SUPPLEMENTARY INFORMATION:**

a. *Purpose.* Offers submitted in response to Government solicitations must be evaluated and awards made on the basis of the lowest laid down cost to the Government at the overseas port of discharge, via methods and ports compatible with required delivery dates and conditions affecting transportation known at the time of evaluation. Offers are evaluated on the basis of shipment through the port resulting in the lowest cost to the Government. This provision collects information regarding the vendors preference for delivery ports.

The information is used to evaluate offers and award a contract based on the lowest cost to the Government.

b. *Annual report burden.* The annual reporting burden is estimated as follows: Respondents, 100; responses per respondent, 4; total annual responses, 400; hours per response, .25; and total response burden hours, 100.

*Obtaining Copies of Proposals:* Requester may obtain copies from General Services Administration, FAR Secretariat (VRS), Room 4041, Washington, DC 20405, telephone (202) 523-4755. Please cite OMB Control No. 9000-0057, Evaluation of Export Offers.

Dated: December 15, 1989.

Margaret A. Willis,  
FAR Secretariat.

[FR Doc. 89-29599 Filed 12-19-89; 8:45 am]

BILLING CODE 6820-JC-M

### **Federal Acquisition Regulation (FAR); Information Collection Under OMB Review**

**AGENCIES:** Department of Defense (DOD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

**ACTION:** Notice.

**SUMMARY:** Under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. chapter 35), the Federal Acquisition Regulation (FAR) Secretariat has submitted to the Office of Management and Budget (OMB) a request to review and approve an extension of an information collection requirement concerning the interim rule on Drug-Free Workplace.

**ADDRESS:** Send comments to Ms. Eyvette Flynn, FAR Desk Officer, OMB, Room 3235, NEOB, Washington, DC 20503.



**FOR FURTHER INFORMATION CONTACT:** Mr. Edward Loeb, Office of Federal Acquisition Policy, (202) 523-3847 or Mr. Owen Green, Defense Acquisition Regulatory Council, (703) 697-7268.

**SUPPLEMENTARY INFORMATION:**

a. *Purpose:* Pub. L. 100-690, the Drug-Free Workplace Act of 1988, mandates that: (1) Government contract employees notify their employer of any criminal drug statute conviction for a violation occurring in the workplace; and (2) Government contractors after receiving notice of such conviction, must notify the Government contracting officer. These requirements were effective as of March 18, 1989.

This information provided to the Government is used to determine contractor compliance with the statutory requirements to maintain a drug-free workplace.

b. *Annual reporting burden:* The annual reporting burden is estimated as follows: Respondents, 100; responses per respondent, 1; total annual responses, 100; hours per response, .17; and total response burden hours, 17.

c. *Annual recordkeeping burden:* The annual recordkeeping burden is estimated as follows: Recordkeepers, 100; hours per recordkeeper, .5; and total recordkeeping burden hours, 50.

**OBTAINING COPIES OF PROPOSALS:** Requester may obtain copies from General Services Administration, FAR Secretariat (VRS), Room 4041, Washington, DC 20405, telephone (202) 523-4755. Please cite OMB Control No. 9000-0101, Drug-Free Workplace.

Dated: December 14, 1989.

Margaret A. Willis,  
FAR Secretariat.

[FR Doc. 89-29600 Filed 12-19-89; 8:45 am]

BILLING CODE 8820-JC-M

## DEPARTMENT OF EDUCATION

### Proposed Information Collection Requests

**AGENCY:** Department of Education.

**ACTION:** Notice of Proposed Information Collection Requests.

**SUMMARY:** The Director, Office of Information Resources Management, invites comments on the proposed information collection requests as required by the Paperwork Reduction Act of 1980.

**DATES:** Interested persons are invited to submit comments on or before January 19, 1990.

**ADDRESSES:** Written comments should be addressed to the Office of Information and Regulatory Affairs,

Attention: Jim Houser, Desk Officer, Department of Education, Office of Management and Budget, 726 Jackson Place, NW., Room 3208, New Executive Office Building, Washington, DC 20503. Requests for copies of the proposed information collection requests should be addressed to George P. Sotos, Department of Education, 400 Maryland Avenue SW., Room 5624, Regional Office Building 3, Washington, DC 20202.

**FOR FURTHER INFORMATION CONTACT:** George P. Sotos (202) 732-2174.

**SUPPLEMENTARY INFORMATION:** Section 3517 of the Paperwork Reduction Act of 1980 (44 U.S.C. chapter 35) requires that the Office of Management and Budget (OMB) provide interested Federal agencies and the public an early opportunity to comment on information collection requests. OMB may amend or waive the requirement for public consultation to the extent that public participation in the approval process would defeat the purpose of the information collection, violate State or Federal law, or substantially interfere with any agency's ability to perform its statutory obligations.

The Director, Office of Information Resources Management, publishes this notice containing proposed information collection requests prior to submission of these requests to OMB. Each proposed information collection, grouped by office, contains the following:

(1) Type of review requested, e.g., new, revision, extension, existing or reinstatement; (2) Title; (3) Frequency of collection; (4) The affected public; (5) Reporting burden; and/or (6) Recordkeeping burden; and (7) Abstract. OMB invites public comment at the address specified above. Copies of the requests are available from George Sotos at the address specified above.

Dated: December 14, 1989.

Carlos Rice,  
Director for Office of Information Resources Management.

### Office of Special Education and Rehabilitative Services

*Type of Review:* Extension.

*Title:* State Plan under Part B of the Education of the Handicapped Act.

*Frequency:* Triennial.

*Affected Public:* State or local governments; Federal agencies or employees.

*Reporting Burden:*

*Responses:* 19

*Burden Hours:* 551

*Recordkeeping Burden:*

*Recordkeepers:* 0

*Burden Hours:* 0

*Abstract:* States are required to submit a State plan in order to receive funds under the Education of the Handicapped Act, as amended. The Department will use the information as a basis for determining grant eligibility, compliance review and enforcement, and the kinds of technical assistance that States may need.

### Office of Elementary and Secondary Education

*Type of Review:* Extension.

*Title:* Assistance for School Construction in Areas Affected by Federal Activities.

*Frequency:* Annually.

*Affected Public:* State or local governments.

*Reporting Burden:*

*Responses:* 10

*Burden Hours:* 380

*Recordkeeping Burden:*

*Recordkeepers:* 25

*Burden Hours:* 5

*Abstract:* The collection of this information is to provide assistance for construction of urgently needed minimum elementary and secondary school facilities in area affected by Federal activities. The Department uses this information to make grant awards.

[FR Doc. 89-29538 Filed 12-19-89; 8:45 am]

BILLING CODE 4000-1-M

### [CFDA 84.025A4]

### Services for Deaf-Blind Children and Youth

Notice inviting applications for new awards for State and Multi-State Projects for Deaf-Blind Children and Youth (CFDA No. 84.025A4) under the Services for Deaf-Blind Children and Youth Program for Fiscal Year 1990.

*Purpose:* To provide support for State and multi-State deaf-blind projects for services to deaf-blind children and youth, and technical assistance to agencies, institutions and organizations as described in 34 CFR 307.11. Potential applicants should use the application forms included in the Consolidated Application Package (CAP) which was published in the Federal Register on July 21, 1989 at 54 FR 30661.

*Deadline for Transmittal of*

*Applications:* March 30, 1990

*Deadline for Intergovernmental Review:*

May 30, 1990

*Available Funds:* \$1,200,000

*Estimated Number of Awards:* 12

*Project Period:* Up to 24 months



**Applicable Regulations:** (a) The regulations for the Services for Deaf-Blind Children and Youth Program, CFR part 307; and (b) the Education Department General Administrative Regulations, 34 CFR parts 74, 75, 77, 79, 80, 81, and 85.

**FOR FURTHER INFORMATION CONTACT:**

Joseph Clair, Office of Special Education and Rehabilitative Services, Division of Educational Services, 400 Maryland Avenue SW., Room 4622, Switzer Building, Washington, DC 20202  
Telephone: (202) 732-4503.

Authority: 20 U.S.C. 1422.

(Catalog of Federal Domestic Assistance No. 84.025; Services for Deaf-Blind Children and Youth Program)

Dated: December 13, 1989.

Robert R. Davila,

Assistant Secretary, Office of Special Education and Rehabilitative Services.

[FR Doc. 89-29539 Filed 12-19-89; 8:45 am]

BILLING CODE 4000-01-M

## DEPARTMENT OF ENERGY

### Federal Energy Regulatory Commission

[Docket Nos. ES90-16-000, et al.]

**Cambridge Electric Light Company, et al.; Electric Rate, Small Power Production, and Interlocking Directorate Filings.**

December 7, 1989.

Take notice that the following filings have been made with the Commission:

**1. Cambridge Electric Light Co.**

[Docket No. ES90-16-000]

Take notice that on December 4, 1989, Cambridge Electric Light Company ("Applicant") filed an application with the Federal Energy Regulatory Commission ("Commission"), pursuant to section 204 of the Federal Power Act, seeking authority to issue not more than \$25 million of short-term debt and other borrowings on or before December 31, 1991 with maturities on or before December 31, 1992.

*Comment date:* December 21, 1989, in accordance with Standard Paragraph E at the end of this notice.

**2. Orange and Rockland Utilities, Inc.**

[Docket No. ES90-17-000]

Take notice that on December 4, 1989, Orange and Rockland Utilities, Inc. ("Applicant") filed an application with the Federal Energy Regulatory Commission ("Commission") pursuant to section 204 of the Federal Power Act, seeking authority to issue and renew short-term unsecured obligations,

maturing in less than one year after the date of issuance, in an aggregate principal amount of up to \$100 million outstanding at any time.

*Comment date:* December 21, 1989, in accordance with Standard Paragraph E at the end of this notice.

**Standard Paragraphs:**

E. Any person desiring to be heard or to protest said filing should file a motion to intervene or protest with the Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). All such motions or protests should be filed on or before the comment date. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a motion to intervene. Copies of this filing are on file with the Commission and are available for public inspection.

Lois D. Cashell,

Secretary.

[FR Doc. 89-29496 Filed 12-19-89; 8:45 am]

BILLING CODE 6717-01-M

[Docket No. QF88-189-001]

**HL Power Company, a California Limited Partnership; Application for Commission Recertification of Qualifying Status of a Small Power Production Facility**

December 12, 1989.

On November 30, 1989, HL Power Company, a California Limited Partnership (Applicant), in care of CMS Generation Honey Lake Company, 330 Town Center Drive, Suite 1040, Dearborn, Michigan 48126, submitted for filing an application for recertification of a facility as a qualifying small power production facility pursuant to § 202.207 of the Commission's regulations. No determination has been made that the submittal constitutes a complete filing.

The small power production facility will be located in Lassen County, California. The facility will consist of a waste wood-fired boiler and an extraction/condensing steam turbine generator. The net electric power production capacity will be approximately 32 megawatts. The primary energy source will be biomass in the form of wood waste.

The certification for the original application was issued on April 15, 1988 (43 FERC ¶ 62,059). The current

recertification is requested due to change in ownership structure. The change in ownership has resulted in a general and limited partners interest in the Applicant being held, directly and indirectly, by subsidiaries of CMS Energy Corporation, a Michigan corporation, an electric utility holding company.

Any person desiring to be heard or objecting to the granting of qualifying status should file a petition to intervene or protest with the Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426, in accordance with rules 211 and 214 of the Commission's Rules of Practice and Procedure. All such petitions or protests must be filed within 30 days after the date of publication of this notice and must be served on the applicant. Protests will be considered by the Commission in determining the appropriate action to be taken but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a petition to intervene. Copies of this filing are on file with the Commission and are available for public inspection.

Lois D. Cashell,

Secretary.

[FR Doc. 89-29497 Filed 12-19-89; 8:45 am]

BILLING CODE 6717-01-M

[Docket Nos. ES90-19-000, et al.]

**UtiliCorp United Inc., et al.; Electric Rate, Small Power Production, and Interlocking Directorate Filings**

December 13, 1989.

Take notice that the following filings have been made with the Commission:

**1. UtiliCorp United Inc.**

[Docket No. ES90-19-000]

Take notice that on December 8, 1989, UtiliCorp United Inc. (Applicant) filed an application seeking an order under section 204(a) of the Federal Power Act authorizing the Applicant to issue a corporate guaranty in support of Series E, Secured Debentures in an amount of \$15,000,000 (Cdn) to be issued by West Kootenay Power, Ltd. ("WKP") and for exemption from competitive bidding and negotiated placement requirements. WKP is a wholly-owned subsidiary of UtiliCorp British Columbia Ltd., which in turn is a wholly owned subsidiary of Applicant.

*Comment date:* December 29, 1989, in accordance with Standard Paragraph E at the end of this notice.



**2. Southwestern Public Service Co.**

[Docket No. ER90-96-000]

Take notice that Southwestern Public Service Company (Southwestern) on December 8, 1989, tendered for filing proposed changes in its rates for full requirements services to Lyntegar Electric Cooperative, Inc. (Lyntegar) and Texas-New Mexico Power Company (TNP) and for partial requirements firm services to TNP.

The proposed change results in a 10 percent decrease in overall revenues for the two full requirements rate schedules and results in a 12 percent decrease in overall revenues for the partial requirements rate schedule. The proposed decrease has obtained requisite agreement from Lyntegar and TNP. Southwestern has reached similar agreements with four other full requirements customers which were filed for approval by the Commission in Docket No. ER90-65-000.

The decrease is proposed to become effective January 1, 1990. The purpose of the decrease is to reflect in the customer's base rates Southwestern's lower costs to provide service to its customers as of January 1, 1990. The lower costs of service result primarily from (1) the termination on December 31, 1989 of Southwestern's purchase of surplus energy from Public Service Company of New Mexico of which a portion of the current reservation fee is included in the customer's existing base rates, (2) reduced capital costs, and (3) reduced federal income taxes arising from the Tax Reform Act of 1986.

Copies of the filing were served upon Lyntegar, TNP, the Public Utility Commission of Texas and the New Mexico Public Service Commission.

*Comment date:* December 29, 1989, in accordance with Standard Paragraph E at the end of this notice.

**3. Florida Power Corp.**

[Docket No. ER89-627-000]

Take notice that on December 11, 1989, Florida Power Corporation tendered for filing a supplement to its August 30, 1989 filing in this docket. This supplement revises the appendix A originally submitted with this filing. Appendix A, the revised rate schedules for each of Florida Power's affected customers, now reflects the application of the 1.391% credit for calendar year 1990, as well as for calendar year 1989.

This supplement also makes a change with respect to First Revised Sheet Nos. 2.106, 2.113 and 5.101, effective January 1, 1990, for Rate Schedule No. 106, to allow the customer's KW allocation to change annually, rather than remain a fixed KW amount. This supplement also

contains a calculation breaking down Florida Power's calculation of annual decommissioning expenses for calendar year 1989 and 1990.

*Comment date:* December 29, 1989, in accordance with Standard Paragraph E at the end of this notice.

**4. Consolidated Edison Company of New York, Inc.**

[Docket No. ER90-93-000]

Take notice that on December 4, 1989, Consolidated Edison Company of New York, Inc. (Con Edison) tendered for filing, as an initial rate schedule, an agreement to sell firm power and energy to the Connecticut Light and Power Company (CL&P). The agreement provides for a capacity charge of \$3 per kilowatt per month and an energy charge of \$100 per megawatt-hour.

Con Edison requests waiver of the notice requirements of Section 35.3 of the Commission's regulations so that the Rate Schedule can be made effective as of November 1, 1989.

Con Edison states that a copy of this filing has been served by mail upon CL&P.

*Comment date:* December 29, 1989, in accordance with Standard Paragraph E at the end of this notice.

**5. Public Service Company of New Hampshire**

[Docket No. ER90-94-000]

Take notice that Public Service Company of New Hampshire, on December 5, 1989, tendered for filing proposed changes in its Wholesale for Resale Contracts with New Hampshire Electric Cooperative, Inc. for Total Requirements Service (FERC No. 50) and Partial Requirements Service (FERC No. 71). If accepted, the proposed agreement would provide credits to be applied to bills rendered to New Hampshire Electric Cooperative if certain of the Cooperative's retail customers voluntarily curtail energy intensive loads during periods when Public Service Company of New Hampshire is highly likely to experience a winter system peak.

The proposed changes would reduce Public Service Company of New Hampshire's need for purchasing capacity outside of its system at a cost in excess of the credits paid to New Hampshire Electric Cooperative, Inc.

Public Service Company requests a waiver of the Commission's notice requirements to permit the agreement to take effect on December 1, 1989.

Copies of the filing were served upon New Hampshire Electric Cooperative, Inc. and the New Hampshire Public Utilities Commission.

*Comment date:* December 29, 1989, in accordance with Standard Paragraph E at the end of this notice.

**6. Bangor Hydro-Electric Co.**

[Docket No. ER90-32-000]

Take notice that Bangor Hydro-Electric Company (Bangor) and UNITIL Power Corporation (UNITIL) on November 22, 1989, tendered for filing as an Initial Rate Schedule, an Electric Generating Capability Sales Agreement. The Agreement provides for the sale by Bangor to UNITIL of 10,000 kw of electric generating capability during November 1, 1989 through October 31, 1990 and the total output associated therewith.

*Comment date:* December 29, 1989, in accordance with Standard Paragraph E at the end of this notice.

**7. United Illuminating Co.**

[Docket No. ER90-95-000]

Take notice that on December 7, 1989, United Illuminating Company (UI) tendered for filing as a rate schedule Letter Agreements between UI and Public Service Company of New Hampshire (PSNH) (the PSNH Agreements). The Agreements dated October 22, 1986, April 28, 1987, and August 1, 1988, provided for UI to sell unit capacity and associated energy to PSNH.

The term of the PSNH Agreement dated October 22, 1986 began on November 1, 1986 and continued through April 30, 1987. The term of the PSNH Agreement dated April 30, 1987 began on May 1, 1987 and continued through October 31, 1987. The term of the PSNH Agreement dated August 1, 1988 began on October 1, 1988 and continued through October 31, 1988.

UI requests the Commission to consolidate the Agreements into one rate schedule, to waive its standard 60-day notice period and to allow the rate schedule to become effective on November 1, 1986, and to terminate on October 31, 1988.

UI states that a copy of this rate schedule has been mailed to PSNH.

UI further states that the filing is in accordance with Section 35 of the Commission's regulations.

*Comment date:* December 29, 1989, in accordance with Standard Paragraph E at the end of this notice.

**8. Public Service Company of Indiana**

[Docket No. ER82-773-000]

Take notice that Public Service Company of Indiana, Inc. on December 5, 1989, tendered for filing pursuant to the Power Coordination Agreement



between Public Service Company of Indiana, Inc. (PSI) and Indiana Municipal Power Agency (IMPA) a Fourth Amendment.

The Fourth Amendment modifies the agreement by modifying section 2.01 to transfer the Town of Waynetown, Indiana and the Town of Bainbridge, Indiana from PSI's FERC Electric Tariff-Original Volume No. 1 to the Power Coordination Agreement as members of IMPA.

Copies of the filing were served on Indiana Municipal Power Agency, the Town of Waynetown, Indiana, the Town of Bainbridge, Indiana and the Indiana Utility Regulatory Commission.

PSI has requested waiver of the Commission's notice requirement to permit the filing to become effective January 1, 1990.

*Comment date:* December 29, 1989, in accordance with Standard Paragraph E at the end of this notice.

#### 9. Montana Power Co.

[Docket No. ER90-89-000]

Take notice that on December 6, 1989, The Montana Power Company tendered for filing as a supplement to its earlier filing in this docket a fixed cost/fixed charge comparison related to the Power Sales Agreement between The Montana Power Company and Puget Sound Power & Light Company filed in this docket.

*Comment date:* December 27, 1989, in accordance with Standard Paragraph E at the end of this notice.

#### 10. Northeast Utilities Service Co.

[Docket No. ER90-100-000]

Take notice that on December 11, 1989, Northeast Utilities Service Company (NUSCO) tendered for filing a Notice of Termination of the following rate schedules:

Transmission Service Agreement between CL&P, WMECO, HWP, and Norwalk Third Taxing District (Norwalk III), dated July 1, 1985 (CL&P Rate Schedule FERC No. 345, WMECO FERC No. 275, and HWP FERC No. 39).

Transmission Service Agreement between CL&P, WMECO, HWP, and South Norwalk Electric Works (South Norwalk), dated July 1, 1985 (CL&P Rate Schedule FERC No. 346, WMECO FERC No. 279, and HWP FERC No. 40) (each a "Transmission Agreement" and collectively, the "Transmission Agreements").

NUSCO requests that the Commission allow the termination for the Municipal Systems' Agreement to take effect on January 8, 1990.

*Comment date:* December 29, 1989, in accordance with Standard Paragraph E at the end of this notice.

#### 11. Wisconsin Power and Light Co.

[Docket No. ER90-99-000]

Take notice that Wisconsin Power and Light Company, on December 11, 1989, tendered for filing new appendix J to the Interconnection Agreement dated July 5, 1988, between Wisconsin Power and Light Company (WPL) and Wisconsin Public Service Corporation (WPS).

Appendix J establishes the new Arpin 115 kV Interconnection between the parties, at WPL's Arpin Substation in Wood County, Wisconsin.

WPL proposes as effective date of July 20, 1989, and therefore requests the Commission to give the appropriate notice period and allow for such effective date.

*Comment date:* December 29, 1989, in accordance with Standard Paragraph E at the end of this notice.

#### 12. Tampa Electric Co.

[Docket No. ER90-98-000]

Take notice that on December 11, 1989, Tampa Electric Company (Tampa Electric) tendered for filing Service Schedule J, providing for negotiated interchange service between Tampa Electric and the Orlando Utilities Commission (Orlando). The service schedule is submitted as a supplement to the existing agreement for interchange service between Tampa Electric and Orlando, designated as Tampa Electric's Rate Schedule FERC No. 27.

Tampa Electric also tendered for filing, as a supplement to the Service Schedule J, a Letter of Commitment providing for the sale by Tampa Electric to Orlando of energy from Tampa Electric's coal-fired generating units, at a maximum hourly delivery rate of 150 megawatts.

Tampa Electric proposes an effective date of November 6, 1989, for the Service Schedule J and Letter of Commitment, and therefore requests waiver of the Commission's notice requirements.

Copies of the filing have been served on Orlando and the Florida Public Service Commission.

*Comment date:* December 29, 1989, in accordance with Standard Paragraph E at the end of this notice.

#### 13. Oklahoma Gas and Electric Co.

[Docket No. ER90-20-000]

Take notice that on December 7, 1989, Oklahoma Gas and Electric Company (OG&E) tendered for filing a revised annex 2 dated December 6, 1989 to appendix a of the Second Amended Dispatch and Load Regulation

Agreement OG&E and the Oklahoma Municipal Power Authority (OMPA).

The revised annex 2 dated December 6, 1989 will replace the annex 2 dated June 30, 1989.

Copies of this filing have been served on OMPA, the Corporation Commission of the State of Oklahoma and the Arkansas Public Service Commission.

*Comment date:* December 29, 1989, in accordance with Standard Paragraph E at the end of this notice.

#### 14. CEI—AMP—Ohio Interconnection Agreement

[Docket No. ER90-07-000]

Take notice that on December 8, 1989, the Cleveland Electric Illuminating Company filed, on behalf of the above listed parties to the CEI—AMP—Ohio Agreement an initial rate schedule between the Cleveland Electric Illuminating Company and American Municipal Power—Ohio, Inc.

This Agreement provides for Short Term Power supplied by CEI. The parties have requested an effective date of October 1, 1989 for this schedule.

*Comment date:* December 29, 1989, in accordance with Standard Paragraph E at the end of this notice.

#### 15. Smith Falls Hydropower

[Docket No. ER90-104-000]

Take notice that on December 12, 1989, Smith Falls Hydropower (Smith Falls) (c/o McNeill Watkins II, Bishop, Cook, Purcell & Reynolds, 1400 L Street, NW., Washington, DC 20005) tendered for filing pursuant to 18 CFR 35.12, proposed Smith Falls Hydropower Rate Schedule FERC No. 1, under which Smith Falls will sell the power and energy to be produced by the 38.15 MW Smith Creek Project (FERC No. 8436) to Eugene Water & Electric Board (EWEB), an Oregon municipal utility. The Smith Creek Project is a qualifying small power production facility. The rates set forth in the proposed rate schedule were negotiated.

In connection with its filing, Smith Falls requests waiver of the Commission's regulations regarding the filing of cost support information and regarding all or part of the Commission's accounting, reporting, securities, property transfer, and interlocking director regulations. Smith Falls requests that the Commission make the rate schedule effective on the date on which sales under the rate schedule commence, which is expected to be December 30, 1989.

*Comment date:* December 27, 1989, in accordance with Standard Paragraph E at the end of this notice.



**16. Iowa Power and Light Co.**

[Docket No. ER89-667-000]

Take notice that on November 11, 1989, Iowa Power and Light Company (Iowa Power) tendered for filing an Amendment to the Interchange Agreement between Iowa Power and the Indianola Waterworks and Electric Light and Power Board or Trustees (Board of Trustees) filed in this docket on September 19, 1989.

Iowa Power states that the Amendment to the Interchange Agreement filing provides a new Service Schedule E to reflect the proper treatment of purchased power. In addition, the amended filing provides information concerning Iowa Power's capacity and energy charge calculations and a description of the mechanics of Iowa Power's energy cost adjustment.

Iowa Power requests an effective date of February 1, 1989, and therefore requests a waiver of the Commission's notice request requirements.

*Comment date:* December 29, 1989, in accordance with Standard Paragraph E at the end of this notice.

**17. Central and South West Services, Inc.**

[Docket No. ER90-102-000]

Take notice that on November 30, 1989, Central and South West Services, Inc. ("CSW") tendered for filing its compliance filing in response to Opinion No. 332, issued by the Commission on August 3, 1989. Opinion No. 332, 48 FERC ¶81,197 (1989), resolved issues regarding CSW's filing in Docket No. ER84-31-000. CSW states that in compliance with the Commission's order it has submitted revised calculation of the fixed charge rates used: (a) to equalize the costs borne by each of the CSW Operating Companies in certain Intertransmission Facilities; and (b) to compensate individual Operating Companies for Capacity Commitments made to other CSW Operating Companies. Each revised fixed charge rate is lower than the fixed charge rate previously in the record in Docket No. ER84-31-000. CSW proposes to make these lower fixed charge rates effective from January 1, 1990. The Commission is docketing these revised fixed charge rates in a separate proceeding in Docket No. ER90-102-000.

*Comment date:* December 27, 1989, in accordance with Standard Paragraph E at the end of this notice.

**Standard Paragraphs:**

E. Any person desiring to be heard or to protest said filing should file a motion to intervene or protest with the Federal Energy Regulatory Commission, 825

North Capitol Street, NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). All such motions or protests should be filed on or before the comment date. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a motion to intervene. Copies of this filing are on file with the Commission.

Lois D. Cashell,  
Secretary.

[FR Doc. 89-29498 Filed 12-19-89; 8:45 am]

BILLING CODE 8717-01-M

**Federal Energy Regulatory Commission**

[Docket Nos. CP90-320-000, et al.]

**K N Energy, Inc., et al.; Natural gas certificate filings**

December 8, 1989.

Take notice that the following filings have been made with the Commission:

**1. K N Energy, Inc.**

[Docket No. CP90-320-000]

Take notice that on December 5, 1989, K N Energy Inc. (K N), P.O. Box 15265, Lakewood, Colorado 80215, filed in Docket No. CP90-320-000 a request pursuant to Sections 157.205 and 284.223 of the Commission's Regulations under the Natural Gas Act for authorization to transport natural gas under the blanket certificate issued in Docket No. CP89-1043-000 pursuant to section 7(c) of the Natural Gas Act, all as more fully set forth in the request on file with the Commission and open to public inspection.

K N proposes to transport natural gas on an interruptible basis for Plains Petroleum Operating Company (Plains). K N explains that service commenced November 1, 1989 under Section 284.223(a) of the Commission's Regulations, as reported in Docket No. ST90-769-000. K N further explains that the peak day volume would be 8,500 Mcf and that the annual volume would be 3,102,500 Mcf. K N explains that it would receive natural gas at existing points of receipt on its system and that it would deliver the gas at various delivery points on its system.

*Comment date:* January 22, 1990, in accordance with Standard Paragraph G at the end of this notice.

**2. Natural Gas Pipeline Company of America**

[Docket No. CP90-319-000]

Take notice that on December 5, 1989, Natural Gas Pipeline Company of America (Natural) 701 East 22nd Street, Lombard, Illinois 60148 filed in Docket No. CP90-319-000 a request pursuant to § 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to transport natural gas on behalf of Quantum Chemical Corporation—USI Division (Quantum), under its blanket authorization issued in Docket No. CP88-582-000 pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the request which is on file with the Commission and open to public inspection.

Natural would perform the proposed firm transportation service for Quantum, an end-user of natural gas, pursuant to a firm transportation service agreement under rate schedule FTS dated August 30, 1989 (Ref No. FGP-1845). The term of the transportation service agreement is from August 30, 1989, and shall continue for a term ending August 31, 1992. Natural proposes to transport on a peak day up to 9,600 MMBtu; on an average day up to 9,600 MMBtu; and on an annual basis 3,504,000 MMBtu for Quantum. Natural proposes to receive the subject gas from points of receipt in Texas and Louisiana for redelivery to points of interconnection with Northern Illinois Gas Company located in Illinois. Natural indicates that it would be using existing facilities to provide the proposed transportation service.

It is explained that the proposed service is currently being performed pursuant to the 120-day self implementing provision of § 284.223(a)(1) of the Commission's Regulations. Natural commenced such self-implementing service on September 25, 1989, as reported in Docket No. ST90-230-000.

*Comment date:* January 22, 1990, in accordance with Standard Paragraph G at the end of this notice.

**3. K N Energy Inc.**

[Docket No. CP90-321-000]

Take notice that on December 5, 1989, K N Energy Inc. (K N), P.O. Box 15265, Lakewood, Colorado 80215, filed in Docket No. CP90-321-000 a request pursuant to §§ 157.205 and 284.223 of the Commission's Regulations under the Natural Gas Act for authorization to transport natural gas under the blanket certificate issued in Docket No. CP89-1043-000 pursuant to section 7(c) of the Natural Gas Act, all as more fully set



forth in the request on file with the Commission and open to public inspection.

K N proposes to transport natural gas on an interruptible basis for J. A. Baldwin Mfg. Company (Baldwin). K N explains that service commenced October 26, 1989 under § 284.223(a) of the Commission's Regulations, as reported in Docket No. ST90-497. K N further explains that the peak day volume would be 257 Mcf and that the annual volume would be 93,805 Mcf. K N explains that it would receive natural gas at existing points of receipt on its system and that it would deliver the gas to Baldwin in Kearney, Nebraska.

*Comment date:* January 22, 1990, in accordance with Standard Paragraph G at the end of this notice.

#### 4. Transwestern Pipeline Company

[Docket No. CP90-325-000]

Take notice that on December 5, 1989, Transwestern Pipeline Company (Transwestern), 1400 Smith Street, P.O. Box 1188, Houston, Texas 77251-1188, filed in Docket No. CP90-325-000 a request pursuant to §§ 157.205 and 284.223 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) and the Natural Gas Policy Act (18 CFR 284.223) for authorization to transport gas on behalf of Cibola Corporation (Cibola), a marketer of natural gas, under Transwestern's blanket certificate issued in Docket No. CP88-133-000 pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the request on file with the Commission and open to public inspection.

Transwestern proposes to transport on an interruptible basis up to 50,000 MMBtu of natural gas equivalent per day on behalf of Cibola pursuant to a transportation agreement dated July 26, 1989, between Transwestern and Cibola. Transwestern would receive the gas at existing delivery points in Arizona, Oklahoma, Texas and New Mexico and redeliver equivalent volumes at existing delivery points in Arizona, Texas, Oklahoma and New Mexico.

Transwestern states that the estimated average daily and annual quantities would be 37,500 MMBtu and 18,250,000 MMBtu, respectively. Service under § 284.223(a) commenced on October 12, 1989, as reported in Docket No. ST90-429-000, it is stated.

*Comment date:* January 22, 1990, in accordance with Standard Paragraph G at the end of this notice.

#### 5. Transcontinental Gas Pipe Line Corporation

[Docket No. CP90-326-000]

Take notice that on December 6, 1989, Transcontinental Gas Pipe Line Corporation (Transco), Post Office Box 1396, Houston, Texas 77251, filed in Docket No. CP90-326-000, a request pursuant to §§ 157.205 and 284.223 of the Commission's Regulations for authorization to provide transportation service on behalf of PSI, Inc. (PSI), a marketer of natural gas, under Transco's blanket certificate in Docket No. CP88-328,000, all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Transco states that the total volume of gas to be transported for PSI on a peak day would be 70,000 dt; on an average day would be 50,000 dt; and on an annual basis would be 255,000 dt.

Transco further states that it would receive the gas at various receipt points in offshore Texas and redeliver the gas at various existing delivery points in onshore and offshore Texas. Transco also states that it will construct no new facilities in order to provide this transportation service.

Transco states that service for PSI commenced October 12, 1989, in Docket No. ST90-407-000, pursuant to the 120-day automatic authorization provided in the Commission's Regulations.

*Comment date:* January 22, 1989, in accordance with Standard Paragraph G at the end of this notice.

#### 6. Northern Natural Gas Company

[Docket No. CP90-328-000]

Take notice that on December 5, 1989, Northern Natural Gas Company (Northern), 1400 Smith Street, P.O. Box 1188, Houston, Texas 77251-1188, filed in Docket No. CP90-328-000 a request pursuant to §§ 157.205 and 284.223 of the Commission's Regulations under the Natural Gas Act for authorization to transport natural gas on a firm basis on behalf of Enron Gas Marketing, Inc. (Enron Marketing), a marketer of natural gas, under its blanket certificate issued in Docket No. CP86-435-000 pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the request on file with the Commission and open to public inspection.

Northern states that it proposes to transport natural gas on behalf of Enron Marketing between a point of receipt in Finney County, Kansas and a Delivery point located in Winkler County, Texas.

Northern further states that the maximum daily, average daily and annual quantities that it would transport of behalf of Enron Marketing would be

11,500 MMBtu equivalent of natural gas, 8,625 MMBtu equivalent of natural gas and 4,197,500 MMBtu equivalent of natural gas, respectively.

Northern indicates that in Docket No. ST90-440, filed with the Commission on November 8, 1989, it reported that transportation service on behalf of Enron Marketing commenced on November 1, 1989 under the 120-day automatic authorization provisions of section 284.223(a).

*Comment date:* January 22, 1989, in accordance with Standard Paragraph G at the end of this notice.

#### 7. Northern Natural Gas Company

[Docket No. CP90-330-000]

Take notice that on December 5, 1989, Northern Natural Gas Company (Northern), 1400 Smith Street, P.O. Box 1188, Houston, Texas 77251-1188, filed in Docket No. CP90-330-000 a request pursuant to §§ 157.205 and 284.223 of the Commission's Regulations under the Natural Gas Act for authorization to transport natural gas on an interruptible basis on behalf of Joseph Energy, Inc. (Joseph Energy), a marketer of natural gas, under its blanket certificate issued in Docket No. CP86-435-000 pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the request on file with the Commission and open to public inspection.

Northern states that it proposes to transport natural gas on behalf of Joseph Energy between a point of receipt in Sutton County, Texas and a delivery point located in Pecos County, Texas.

Northern further states that the maximum daily, average daily and annual quantities that it would transport of behalf of Joseph Energy would be 4,000 MMBtu equivalent of natural gas, 3,000 MMBtu equivalent of natural gas and 1,095,000 MMBtu equivalent of natural gas, respectively.

Northern indicates that in Docket No. ST90-439, filed with the Commission on November 8, 1989, it reported that transportation service on behalf of Joseph Energy commenced on October 21, 1989 under the 120-day automatic authorization provisions of § 284.223(a).

*Comment date:* January 22, 1990, in accordance with Standard Paragraph G at the end of this notice.

#### 8. Natural Gas Pipeline Company of America

[Docket No. CP90-334-000]

Take notice that on December 6, 1989, Natural Gas Pipeline Company of America (Natural), 701 East 22nd Street, Lombard, Illinois 60148, filed in Docket No. CP90-334-000 a request pursuant to § 157.205 and 284.223 of the



Commission's Regulations under the Natural Gas Act (18 CFR 157.205 and 284.223) for authorization to transport gas on an interruptible basis for PSI, Inc. (PSI), a marketer, under Natural's blanket certificate issued in Docket No. CP86-582-000 pursuant to Section 7 of the Natural Gas Act, all as more set forth in the request which is on file with the Commission and open to public inspection.

Natural states that pursuant to a transportation service agreement dated February 20, 1989, it proposes to transport up to 50,000 million Btu of natural gas for PSI. Natural states that it would receive the gas at specified points in Texas, Offshore Texas, Louisiana, Offshore Louisiana, Oklahoma, Illinois, Arkansas, New Mexico, Kansas, and Iowa and redeliver the gas at specified interconnects with Peoples Gas Light and Coke Company located in the state of Illinois. Natural estimates that the maximum day, average day, and annual volumes would be 50,000 million Btu, 25,000 million Btu, and 9,125,000 million Btu, respectively. It is stated that on October 1, 1989, Natural initiated a 120-day transportation service for PSI under § 284.223(a), as reported in Docket No. ST90-157-000.

Natural further states that no facilities need be constructed to implement the service. Natural indicates that the service would continue for a primary term expiring February 8, 1999, and month to month thereafter unless terminated on five days notice by either party. Natural proposes to charge rates and abide by the terms and conditions of its Rate Schedule ITS.

*Comment date:* January 22, 1990, in accordance with Standard Paragraph G at the end of this notice.

#### 9. Natural Gas Pipeline Company of America

[Docket No. CP90-335-000]

Take notice that on December 6, 1989, Natural Gas Pipeline Company of America (Natural), 701 East 22nd Street, Lombard, Illinois 60148, filed in Docket No. CP90-335-000 a request pursuant to § 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to transport natural gas on behalf of Bethlehem Steel Corporation (Bethlehem), an end user of natural gas, under Natural's blanket certificate issued in Docket No. CP86-582-000 pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the request which is on file with the Commission and open to public inspection.

Natural proposes to transport, on a firm basis, up to 10,000 MMBtu per day for Bethlehem. Natural states that construction of facilities would not be required to provide the proposed service.

Natural further states that the maximum day, average day, and annual transportation volumes would be approximately 10,000 MMBtu, 10,000 MMBtu and 3,850,000 MMBtu respectively.

Natural advises that service under § 284.223(a) commenced October 1, 1989, as reported in Docket No. ST90-227.

*Comment date:* January 22, 1990, in accordance with Standard Paragraph G at the end of this notice.

#### 10. Natural Gas Pipeline Company of America

[Docket No. CP90-336-000]

Take notice that on December 6, 1989, Natural Gas Pipeline Company of America (Natural), 701 East 22nd Street, Lombard, Illinois, 60148, filed in Docket No. CP90-336-000 a request pursuant to § 157.205 of the Commission's Regulations for authorization to provide transportation service on behalf of Bethlehem Steel Corporation (Bethlehem), under Natural's blanket certificate issued in Docket No. CP86-582-000, pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Natural requests authorization to transport, on a firm basis, up to a maximum of 10,000 MMBtu of natural gas per day (plus any additional volumes accepted pursuant to the overrun provision's of Natural's Rate Schedule FTS) for Bethlehem from receipt points located in Kansas and Iowa to a delivery point located in Illinois. Natural anticipates transporting, on an average day 10,000 MMBtu and an annual volume of 3,650,000 MMBtu.

Natural states that the transportation of natural gas for Bethlehem commenced October 1, 1989, as reported on Docket No. ST90-232-000, for a 120-day period pursuant to § 284.223(a) of the Commission's Regulations and the blanket certificate issued to Natural in Docket No. CP86-582-000.

*Comment date:* January 22, 1990, in accordance with Standard Paragraph G at the end of this notice.

#### 11. Natural Gas Pipeline Company of America

[Docket No. CP90-337-000]

Take notice that on December 6, 1989, Natural Gas Pipeline Company of America (Natural), 701 East 22nd Street,

Lombard, Illinois, 60148, filed in Docket No. CP90-337-000 a request pursuant to § 157.205 of the Commission's Regulations for authorization to provide transportation service on behalf of Mobil Natural Gas Inc. (Mobil), under Natural's blanket certificate issued in Docket No. CP86-582-000, pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the application which is on file with the Commission and open to public inspection.

Natural requests authorization to transport, on a firm basis, up to a maximum of 26,500 MMBtu of natural gas per day (plus any additional volumes accepted pursuant to the overrun provision's of Natural's Rate Schedule FTS) for Mobil from receipt points located in Kansas and Oklahoma to delivery points located in Illinois and Indiana. Natural anticipates transporting, on an average day 26,500 MMBtu and an annual volume of 9,581,000 MMBtu.

Natural states that the transportation of natural gas for Mobil commenced October 1, 1989, as reported on Docket No. ST90-228-000, for a 120-day period pursuant to § 284.223(a) of the Commission's Regulations and the blanket certificate issued to Natural in Docket No. CP86-582-000.

*Comment date:* January 22, 1990, in accordance with Standard Paragraph G at the end of this notice.

#### 12. Natural Gas Pipeline Company of America

[Docket No. CP90-338-000]

Take notice that on December 6, 1989, Natural Gas Pipeline Company of America (Natural), 701 East 22nd Street, Lombard, Illinois, 60148, filed in Docket No. CP90-338-000 a request pursuant to § 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to transport natural gas on behalf of Texaco Gas Marketing Inc. (Texaco), a marketer of natural gas, under Natural's blanket certificate issued in Docket No. CP86-582-000 pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the request which is on file with the Commission and open to public inspection.

Natural proposes to transport, on an interruptible basis, up to 80,000 MMBtu per day for Texaco. Natural states that construction of facilities would not be required to provide the proposed service.

Natural further states that the maximum day, average day, and annual transportation volumes would be approximately 80,000 MMBtu, 40,000



MMBtu and 14,600,000 MMBtu respectively.

Natural advises that service under § 284.223(a) commenced October 1, 1989, as reported in Docket No. ST90-266.

*Comment date:* January 22, 1990, in accordance with Standard Paragraph G at the end of this notice.

### 13. Natural Gas Pipeline Company of America

[Docket No. CP90-339-000]

Take notice that on December 6, 1989, Natural Gas Pipeline Company of America (Natural), 701 East 22nd Street, Lombard, Illinois 60148, filed in Docket No. CP90-339-000 a request pursuant to § 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to provide a firm transportation service for Bethlehem Steel Corporation (Bethlehem), an end-user, under the blanket certificate issued in Docket No. CP86-582-000, pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the request that is on file with the Commission and open to public inspection.

Natural states that pursuant to a transportation service agreement dated August 9, 1989, under its Rate Schedule FTS, it proposes to transport up to 15,000 MMBtu per day equivalent of natural gas for Bethlehem. Natural states that it would transport the gas (plus any additional volumes accepted pursuant to the overrun provisions of Natural's Rate Schedule FTS) from receipt points located in Louisiana, Texas and Arkansas, and would deliver the gas to delivery points located in Illinois and Texas.

Natural advises that service under § 284.223(a) commenced October 1, 1989, as reported in Docket No. ST90-229. Natural further advises that it would transport 15,000 MMBtu on an average day and 5,475,000 MMBtu annually.

*Comment date:* January 22, 1989, in accordance with Standard Paragraph G at the end of this notice.

### 14. Natural Gas Pipeline Company of America

[Docket No. CP90-340-000]

Take notice that on December 6, 1989, Natural Gas Pipeline Company of America (Natural), 701 East 22nd Street, Lombard, Illinois 60148, filed in Docket No. CP90-340-000 a request pursuant to § 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to transport natural gas, on a firm basis, for Bethlehem Steel Corporation (Bethlehem), an end-user, under Natural's blanket certificate issued in

Docket No. CP86-582-000, pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the request on file with the Commission and open to public inspection.

Natural states that pursuant to a Transportation Service Agreement, dated August 9, 1989, it would transport up to 15,000 MMBtu per day of natural gas for Bethlehem. Natural further states that the receipt points would be located in the states of Texas and Arkansas and the delivery points would be located in the states of Illinois and Texas. Natural indicates that the anticipated average day and annual volumes to be transported would be 15,000 MMBtu and 5,475,000 MMBtu, respectively.

Natural states that it commenced the transportation of natural gas for Bethlehem on October 1, 1989, as reported in Docket No. ST90-231-000, for a 120-day period pursuant to § 284.223(a) of the Commission's Regulations (18 CFR 284.223(a)).

*Comment date:* January 22, 1989, in accordance with Standard Paragraph G at the end of this notice.

### 15. United Gas Pipe Line Company

[Docket No. CP90-341-000]

Take notice that on December 6, 1989, United Gas Pipe Line Company (United), P.O. Box 1478, Houston, Texas 77251-1478, filed in Docket No. CP90-341-000 a request pursuant to § 157.205 of the Commission's Regulations under the Natural Gas Act (18 CFR 157.205) for authorization to provide an interruptible transportation service for Mobil Natural Gas, Inc. (Mobil), a marketer, under the blanket certificate issued in Docket No. CP86-6-000, pursuant to section 7 of the Natural Gas Act, all as more fully set forth in the request that is on file with the Commission and open to public inspection.

United states that pursuant to a transportation agreement dated July 18, 1988, under its Rate Schedule ITS, it proposes to transport up to 51,500 MMBtu per day equivalent of natural gas for Mobil. United states that it would transport the gas from multiple receipt points as shown in Exhibit "A" of the transportation agreement and would deliver the gas to multiple delivery points shown in Exhibit "B" of the agreement.

United advises that service under § 284.223(a) commenced October 18, 1989, as reported in Docket No. ST90-670 (filed November 18, 1989). United further advises that it would transport 51,500 MMBtu on an average day and 18,797,500 MMBtu annually.

*Comment date:* January 22, 1989, in accordance with Standard Paragraph G at the end of this notice.

G. Any person or the Commission's staff may, within 45 days after the issuance of the instant notice by the Commission, file pursuant to Rule 214 of the Commission's Procedural Rules (18 CFR 385.214) a motion to intervene or notice of intervention and pursuant to § 157.205 of the Regulations under the Natural Gas Act (18 CFR 157.205) a protest to the request. If no protest is filed within the time allowed therefore, the proposed activity shall be deemed to be authorized effective the day after the time allowed for filing a protest. If a protest is filed and not withdrawn within 30 days after the time allowed for filing a protest, the instant request shall be treated as an application for authorization pursuant to section 7 of the Natural Gas Act.

Lois D. Cashell,

Secretary.

[FR Doc. 89-29499 Filed 12-19-89; 8:45 am]

BILLING CODE 6717-01-M

[Docket No. TQ90-2-24-000]

### Equitrans, Inc.; Proposed Change in FERC Gas Tariff

December 12, 1989

Take notice that Equitrans, Inc. (Equitrans) on December 7, 1989, tendered for filing with the Federal Energy Regulatory Commission (Commission) the following tariff sheets to its FERC Gas Tariff, Original Volume No. 1, to become effective December 8, 1989.

First Revised Thirteenth Revised Sheet No. 10

First Revised Twelfth Revised Sheet No. 14

First Revised Sixth Revised Sheet No. 34

This filing implements an Out-of-Cycle Purchased Gas Cost Adjustment to reflect an increase in the sales projection, increase in Equitrans' pipeline supplier rates and the recovery of Texas Eastern Transmission Corporation's (TETCO) firm transportation costs under TETCO's Rate Schedule FT-1.

Pursuant to § 154.51 of the Commission's regulations, Equitrans requests that the commission grant any waivers necessary to permit the tariff sheets contained herein to become effective on December 8, 1989.

Equitrans states that a copy of its filing has been served upon its purchasers, interested state commissions, and upon each party on the service list of Docket No. CP86-676-000.

Any person desiring to be heard or to protest said filing should file a motion to intervene or protest with the Federal



Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426, in accordance with §§ 385.214 and 385.211 of the Commission's Rules and Regulations. All such motions or protests should be filed on or before December 20, 1989. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a motion to intervene. Copies of this filing are on file with the Commission and are available for public inspection in the public reference room.

Lois D. Cashell,

Secretary.

[FR Doc. 89-29500 Filed 12-19-89; 8:45 am]

BILLING CODE 6717-01-M

[Docket No. TA89-1-55-004]

**Questar Pipeline Co.; Rate Change**

December 12, 1989.

Take notice that on December 8, 1989, Questar Pipeline Company tendered for filing and acceptance certain revised tariff sheets to its FERC Gas Tariff as follows:

Tariff	Proposed effective date
Substitute First Revised Twenty-Sixth Revised Sheet No. 12.	Dec. 1, 1989.
Substitute First Revised Twenty-Seventh Revised Sheet No. 12.	Jan. 1, 1990.

Questar Pipeline states that the purpose of this filing is to revise those tariff sheets submitted on November 22, 1989, in the captioned proceeding to correct three typographical errors.

Any person desiring to protest this filing should file a protest with the Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426, in accordance with Rules 214 and 211 of the Commission's Rules of Practice and Procedure (18 CFR 385.214 and 384.211, (1988)). All such protests should be filed on or before December 20, 1989. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Persons that are already parties to this proceeding need not file a motion to intervene in this matter. Copies of this

filing are on file with the Commission and are available for public inspection.

Lois D. Cashell,

Secretary.

[FR Doc. 89-29501 Filed 12-19-89; 8:45 am]

BILLING CODE 6717-01-M

**Viking Gas Transmission Co.; Rate Filing**

[Docket No. TQ90-1-82-000]

December 12, 1989.

Take notice that on December 7, 1989, Viking Gas Transmission Company (Viking) filed its Third Revised Sheet No. 6 to Original Volume No.1 of its FERC Gas Tariff, to be effective November 1, 1989.

Viking states that the current Purchased Gas Cost Rate Adjustments reflected on Third Revised Sheet No. 6 consist of a .2802 cents per dekatherm adjustment applicable to the gas component of Viking's sales rates and a \$5.00 per dekatherm adjustment applicable to the demand component of Viking's sales rates. The need for this adjustment arises from the renegotiation of prices for purchased gas, such renegotiated prices to be effective November 1, 1989.

Viking states that copies of the filing have been mailed to all of its jurisdictional customers on its system and affected state regulatory commissions.

Any person desiring to be heard or to protest said filing should file a motion to intervene or protest with the Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426, in accordance with §§ 385.214 and 385.211 of the Commission's Rules and Regulations. All such motions or protests should be filed on or before December 20, 1989. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a motion to intervene. Copies of this filing are on file with the Commission and are available for public inspection in the public reference room.

Lois D. Cashell,

Secretary.

[FR Doc. 89-29502 Filed 12-19-89; 8:45 am]

BILLING CODE 6717-01-M

[Docket No. SA90-3-000]

**Wainoco Oil & Gas Co. Petition for Adjustment**

December 12, 1989.

On October 25, 1989, Wainoco Oil & Gas (Wainoco) Company filed with the Federal Energy Regulatory Commission (Commission) a petition for adjustment to recover the Btu refund which it has paid and which is uncollectible. Wainoco states that it has paid \$12,900.88 to Valero Interstate Transmission Co. (Valero) which represents the Btu refunds required by Order Nos. 399-A and 399-B attributable to certain royalty interests. Wainoco also asserts that it was unable to collect these refunds from the royalty owners and that the statute of limitations for collection under applicable state law has run, so that this refund has become uncollectible. Wainoco has requested Valero to repay the amount, but it has refused to do so. Accordingly, Wainoco petitioned the Commission to issue an order directing Valero to repay the amount.

The procedures applicable to the conduct of this adjustment proceeding are found in subpart K of the Commissions Rules of Practice and Procedure. 18 CFR part 385, Subpart K (1989). Any person desiring to participate in this adjustment proceeding must file a motion to intervene in accordance with the provisions of subpart K. All motions to intervene must be filed within fifteen (15) days after publication of this notice in the Federal Register.

Lois D. Cashell,

Secretary.

[FR Doc. 89-29503 Filed 12-19-89; 8:45 am]

BILLING CODE 6717-01-M

**Western Area Power Administration**

**Floodplain/Wetlands Involvement for the Flatiron-Weld 115-Kilovolt Transmission Line Reconductor Project; Larimer and Weld Counties, CO**

**AGENCY:** Western Area Power Administration, DOE.

**ACTION:** Floodplain/Wetlands involvement and opportunity to comment.

**SUMMARY:** The Department of Energy (DOE), Western Area Power Administration (Western), is proposing to reconductor its existing 115-kilovolt Flatiron-Weld Transmission Line. The line, located in Larimer and Weld Counties, Colorado, is approximately 25



miles long and extends from the Flatiron Substation, southwest of Loveland, Colorado, near the Flatiron Reservoir, to the Weld Substation, west of Greeley, Colorado. Pursuant to DOE's "Compliance with Floodplain/Wetlands Environmental Review Requirements," 10 CFR part 1022, Western has determined that this proposed project would involve activities within a floodplain area. Approximately 90 percent of the proposed project area has been mapped by the Federal Management Agency (FEMA). Portions of the unincorporated areas have not been mapped. According to FEMA maps, about 5 percent of the existing transmission line in the mapped area lies within identified 100-year floodplains.

Wetlands for the entire project area have been mapped by the U.S. Fish and Wildlife Service's National Wetlands Inventory. The existing line does cross mapped wetlands. Western will prepare a floodplain/wetlands assessment in accordance with Executive Order 11938—Floodplain Management, and Executive Order 11990—Protection of Wetlands. The floodplain/wetlands assessment will be part of the National Environmental Policy Act compliance document which Western is preparing for the subject proposed project. The existing transmission line carries power from the Flatiron Substation to the Weld Substation and is a principal part of Western's northern Colorado transmission system. The existing line was constructed in the 1950's using 477 MCM ACSR conductor supported by wood H-frame structures. The line was reconductored in 1959 with 795 MCM ACSR conductor to accommodate increased loads in the area. The new conductor was strung at higher tension to meet minimum ground clearance criteria. This increased tension has caused the outer strands of the conductor to break at the suspension shoes. The existing conductor will be replaced with 795 MCM ACSR 45/7 conductor. H-frame poles, crossarms, insulators, and hardware will be replaced as necessary at the present locations. No additional right-of-way will be required to accommodate the proposed action.

**DATE:** Public comments or suggestions concerning the floodplain involvement of Western's proposed action are invited. Any comments are due by January 9, 1990.

**ADDRESSES:** Comments or suggestions should be sent to:

Mr. Stephen A. Fausett, Area Manager,  
Loveland Area Office, Western Area  
Power Administration, P.O. Box 3700,

Loveland, CO 80539-3700, (303) 490-7200;

Mr. Gary W. Frey, Director of  
Environmental Affairs, Western Area  
Power Administration, P.O. Box 3402,  
Golden, CO 80401, (303) 231-1527.

**FOR FURTHER INFORMATION CONTACT:**

Mr. William Melander, Environmental  
Specialist, Loveland Area Office,  
Western Area Power Administration,  
P.O. Box 3700, Loveland, CO 80539-3700,  
(303) 490-7231.

Issued at Golden, Colorado, December 8,  
1989.

William H. Claggett,  
Administrator.

[FR Doc. 89-29589 Filed 12-19-89; 8:45 am]

BILLING CCDE 6450-01-M

**ENVIRONMENTAL PROTECTION  
AGENCY**

[OPP-100070; FRL-3666-3]

**U.S. Department of Justice; Automated  
Sciences Group, Inc.; Octo Inc.;  
Transfer of Data**

**AGENCY:** Environmental Protection  
Agency (EPA).

**ACTION:** Notice.

**SUMMARY:** This is a notice to certain persons who have submitted information to EPA in connection with pesticide information requirements imposed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Food, Drug, and Cosmetic Act (FFDCA). The U.S. Department of Justice (DOJ) has created a large multi-contract capability to handle a requirement to microfiche their hearing records. Other federal agencies have been invited to use this capability to help normalize the work volumes among the contracts. This DOJ contract capability is accessed by other agencies through an Interagency Agreement (IAG) with DOJ, who administers the contracts. Under the IAG, DOJ and its contractors, Automated Sciences Group, Inc. (ASG) and Octo Inc., will perform work for EPA's Office of Pesticide Programs and will be provided access to certain information submitted to EPA under FIFRA and the FFDCA. Some of this information may have been claimed to be confidential business information (CBI) by submitters. This information will be transferred through DOJ to its contractors, ASG and Octo Inc. consistent with the requirements of 40 CFR 2.209(c) and 2.308(i)(2), respectively. This transfer will enable DOJ and its contractors, ASG and Octo Inc. to fulfill the obligations of an IAG

and this notice serves to notify affected persons.

**DATE:** DOJ and its contractors, ASG and Octo Inc. will be given access to this information no sooner than January 2, 1990.

**FOR FURTHER INFORMATION CONTACT:**

By mail: Catherine S. Grimes, Program  
Management and Support Division  
(H7502C), Office of Pesticide  
Programs, Environmental Protection  
Agency, 401 M St., SW., Washington,  
DC 20460.

Office location and telephone number:  
Rm. 212, Crystal Mall #2, 1921  
Jefferson Davis Highway, Arlington,  
VA, (703) 557-4460.

**SUPPLEMENTARY INFORMATION:** Under the IAG with DOJ, its contractors, ASG and Octo Inc. will produce and/or quality check archival images of documents on microfiche, of data either produced by or submitted to the Office of Pesticide Programs. Employees of DOJ and its contractors, ASG and Octo Inc. will have access to all data that are filmed, but such access is incidental to their work. They are not in a position to know the actual significance of the data, nor do they use the data within its subject-matter context.

Some of this information may be entitled to confidential treatment. The information has been submitted to EPA under sections 3, 4, 6, and 7 of FIFRA and obtained under sections 408 and 409 of FFDCA.

In accordance with the requirement of 40 CFR 2.209(c) and 2.308(i)(2), the IAG with DOJ and its contractors, ASG and Octo Inc. prohibits use of the information for any purpose other than the purposes specified in the IAG; prohibits disclosure of the information in any form to a third party without prior written approval from the Agency or affected business; and requires that each official and employee sign an agreement to protect the information from unauthorized release. In addition, DOJ's contractors, ASG and Octo Inc. are required to submit for EPA approval a security plan under which any CBI will be secured and protected against unauthorized release or compromise. No information will be provided until the above requirements have been fully satisfied. Records of information provided under the IAG will be maintained by the Project Officer for each task in the EPA Office of Pesticide Programs.

All information supplied to DOJ and its contractors, ASG and Octo Inc. by EPA for use in connection with the IAG will be returned to EPA when ASG and Octo Inc. have completed their work.



Dated: December 8, 1989.  
 Douglas D. Camp, Jr.  
 Director, Office of Pesticide Programs.  
 [FR Doc. 89-29488 Filed 12-19-89; 8:45am]  
 BILLING CODE 6580-50-D

## ENVIRONMENTAL PROTECTION AGENCY

[FRL-3698-6]

### De Minimis Settlement and Request for Public Comment; Department of the Air Force

**AGENCY:** United States Environmental Protection Agency.

**ACTION:** Notice of de minimis settlement and request for public comment.

**SUMMARY:** The U.S. Environmental Protection Agency ("U.S. EPA") is proposing to enter into a de minimis settlement with the U.S. Department of Air Force ("USAF") under section 122(g) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. 9622(g). This proposed settlement is intended to resolve the liability under CERCLA of USAF as a de minimis party for response costs incurred and to be incurred at the Colbert Landfill in Spokane County, Washington.

**DATES:** Comments must be provided on or before January 19, 1990.

**ADDRESS:** Comments should be addressed to Cynthia Mackey, Office of Regional Counsel, U.S. Environmental Protection Agency, Region 10, 1200 Sixth Avenue, SO-125, Seattle, WA., 98101, and should refer to Colbert Landfill, Spokane County, WA.

**FOR FURTHER INFORMATION CONTACT:** Cynthia Mackey, U.S. Environmental Protection Agency, Office of Regional Counsel, 1200 Sixth Avenue, SO-125, Seattle, WA., 98101, (206) 442-1777.

**SUPPLEMENTARY INFORMATION:** In accordance with section 12(i)(1) of CERCLA, notice is hereby given of a proposed administrative settlement concerning the Colbert Landfill in Spokane County, Washington. Subject to review by the public pursuant to this Notice, the agreement has been approved by the U.S. Department of Justice and USAF. U.S. EPA is entering into this agreement under the authority of section 122(g) and section 107 of CERCLA. Section 1222(g) authorizes early settlements with de minimis parties to allow them to resolve their liabilities at Superfund sites without incurring substantial transaction costs. Under this authority, the agreement proposes to settle with USAF. The

amount contributed by USAF does not exceed ten percent (10%) by volume of the known hazardous substances at the site (and represents a much smaller percentage of the probable unrecorded site waste). Further, the toxic or other hazardous substances contributed by USAF do not contribute disproportionately to the cumulative toxic or other hazardous effects of the hazardous substances at the site.

Pursuant to the agreement, USAF has agreed to pay one million four hundred fifty thousand dollars (\$1,450,000.00). This payment represents a minor portion of the total estimated response costs at this site of approximately fourteen million dollars (\$14,000,000.00). U.S. EPA has identified other potentially responsible parties who may be held responsible for some of these costs. In exchange for this settlement payment and subject to an express reservation of rights, U.S. EPA will enter a covenant not to sue for further civil liability for reimbursement of response costs or for injunctive relief pursuant to sections 106 or 107(a) of CERCLA, 42 U.S.C. 9606 or 9607(a), or section 7003 of the Resource Conservation and Recovery Act, as amended, 42 U.S.C. 6973, with regard to the Colbert site. Pursuant to CERCLA 122(g)(5), 42 U.S.C. 9622(g)(5) and subject to an express reservation of rights, USAF will not be liable for claims for contribution for Covered Matters by any other person.

U.S. EPA will receive written comments relating to this agreement for thirty (30) days from the date of publication of this notice.

A copy of the proposed administrative settlement agreement may be obtained in person or by mail from U.S. EPA Region 10, Office of Regional Counsel, 1200 Sixth Avenue, Seattle, Washington, 98101. Additional background information relating to the settlement is available for review at U.S. EPA Region 10, Office of Regional Counsel.

Charles Findley,

Acting Regional Administrator

[FR Doc. 89-29580 Filed 12-19-89; 8:45 am]

BILLING CODE 6560-50-M

## FEDERAL COMMUNICATIONS COMMISSION

### Privacy Act of 1974; Systems of Records

**AGENCY:** Federal Communications Commission (FCC).

**ACTION:** Notices of two proposed new systems of records and an altered system of records.

**SUMMARY:** This notice meets the requirements of the Privacy Act of 1974 regarding the publication of an agency's notice of systems of records. It documents minor changes to an existing system and proposes to establish two new systems of records. Also, the document republishes for reference certain blanket routine uses which may be made of the information in selected systems of records.

**DATES:** Written comments on the proposed changes should be received on or before January 19, 1990. All proposals shall be effective after this date unless FCC receives comments that would require a contrary determination. As required by 5 U.S.C. 552a(o) of the Privacy Act, the FCC submitted reports to the Congress and to the Office of Management and Budget (OMB). The system of records will become effective on or before February 20, 1990.

**ADDRESSES:** Comments should be mailed to Terry D. Johnson, Privacy Act Officer, Information Resources Branch, Room 416, Federal Communications Commission, 1919 M Street NW., Washington, DC 20554. Written comments will be available for inspection at the above address between 9:00 a.m. and 4:00 p.m., Monday through Friday.

**FOR FURTHER INFORMATION CONTACT:** Terry D. Johnson, Privacy Act Officer, Information Resources Branch, Room 416, Federal Communications Commission, 1919 M Street NW., Washington, DC 20554, (202) 634-1535.

**SUPPLEMENTARY INFORMATION:** As required by the Privacy Act of 1974, 5 U.S.C. 552a(e)(4), this document sets forth notice of the existence and character of the systems of records maintained by the FCC. The agency previously gave complete notice of its systems of records by publication in the Federal Register on September 2, 1988, 53 FR 34149. The Commission altered its system of records to reflect minor changes in its inventory of systems of records (54 FR 18592), May 1, 1989. This notice is a summary of more detailed information which may be viewed at the location and hours given in the "ADDRESSES" section above.

### Prefatory Statement

#### Altered Systems of Records:

A system of records is being revised. As required by the Privacy Act and OMB Circular No. A-130, an Altered System Report for this system has been submitted to the Office of Management and Budget, the President of the Senate, and the Speaker of the House for the



following system. The proposed modifications are as follows:

1. For FCC/PRB-4, PRB Compliance, the categories of records has been expanded to cover a computer case log.

#### *New Systems of Records:*

Two new systems of records are included in this document: FCC/OIG-1, General Investigative Files, is being established by the FCC for the purpose of preventing and detecting alleged waste, fraud and abuse, or conducting and supervising audits and investigations relating to programs and operations.

FCC/FOB-3, Employee Activity System, is being established by the FCC for the purpose of identifying the staffing plan for the bureau, as well as reflecting the current status of personnel actions for each employee.

These systems will be effective 60 days from publication, unless comments received require a contrary determination.

#### **Blanket Routine Uses**

The Commission established general or "blanket" routine uses that may be made of the information in its systems of records. The following blanket routine uses may be applied to, and incorporated by reference into, every record system maintained within the Commission. The extent of their application is indicated by a listing of the blanket routine use numbers in each individual system notice. These blanket routine uses are published in this manner in order to avoid unnecessary repetition and in the interest of simplicity and economy, rather than repeating them in each individual system of records notice:

##### *1. Routine Use—Law Enforcement:*

Where there is an indication of a violation or potential violation of a statute, regulation, rule, or order, the relevant records may be referred to the appropriate Federal, state, or local agency responsible for investigating or prosecuting a violation or for enforcing or implementing the statute, rule, regulation or order.

2. *Routine Use—Disclosure When Requesting Information:* A record may be disclosed to request information from a Federal, state, or local agency maintaining civil, criminal, or other relevant enforcement information or other pertinent information, such as licenses, if necessary to obtain information relevant to a Commission decision concerning the hiring or retention of an employee, the issuance of a security clearance, the letting of a

contract, or the issuance of a license, grant or other benefit.

3. *Routine Use—Disclosure of Requested Information to a Federal Agency:* A record may be disclosed to a Federal agency, in response to its request, in connection with the hiring or retention of an employee, the issuance of a security clearance, the reporting of an investigation of an employee, the letting of a contract, or the issuance of a license, grant or other benefit.

4. *Routine Use—Congressional Inquiries:* A record on an individual in a system of records may be disclosed to a congressional office in response to an inquiry the individual has made to the congressional office.

5. *Routine Use—Disclosure to the General Services Administration (GSA) and the National Archives and Records Administration (NARA):* A Record from a system of records may be disclosed to GSA and NARA for the purpose of records management inspections conducted under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall not be used to make a determination about individuals.

6. *Routine Use—Disclosure to a Court or Administrative Body:* A record on an individual in a system of records may be disclosed, where pertinent, in any legal proceeding to which the Commission is a party before a court or administrative body.

7. *Routine Use—Disclosure to the Department of Justice or a Court for Litigation:* A record from a system of records may be disclosed to the Department of Justice or in a proceeding before a court or adjudicative body when:

(a) The United States, the Commission, a component of the Commission, or, when represented by the government, an employee of the Commission is a party to litigation or anticipated litigation or has an interest in such litigation, and

(b) The Commission determines that the disclosure is relevant or necessary to the litigation and is compatible with the purpose for which the records were compiled.

8. *Routine Use—Disclosure to the Office of Personnel Management (OPM):* A record in a system of records which concerns information on pay and leave, benefits, retirement deductions, and any other pertinent information may be disclosed to the Office of Personnel Management in order for it to carry out its legally authorized Government-wide functions and duties.

The compatible blanket routine uses are incorporated into FCC systems of

records as specified in the following table:

System No.	System name	Blanket routine uses proposed (numbers)
FCC/FOB-3...	Employee Activity System.	1 through 7.
FCC/PRB-4...	Private Radio Bureau Compliance.	1 through 7.
FCC/OIG-1...	General Investigative Files.	1 through 8.

Federal Communications Commission.  
William F. Caton,  
Acting Secretary.

#### **FCC/FOB-3**

##### **SYSTEM NAME:**

Employee Activity System.

##### **SYSTEM LOCATION:**

Administrative office of the Federal Communications Commission (FCC), Field Operations Bureau (FOB), 1919 M Street NW., Washington, DC 20554.

##### **CATEGORIES OF INDIVIDUALS COVERED BY THIS SYSTEM:**

Current employees within FOB at the FCC.

##### **CATEGORIES OF RECORDS IN THE SYSTEM:**

This system contains a person's name, social security number, organizational code, title, grade, salary, date of birth, service computation date, and date employee entered on duty. Included in this system are employees' standards, appraisal information and awards. The system also contains the home address and telephone number of the employee and the name, address, and telephone number of an individual to contact in the event of a medical or other emergency involving the employee.

##### **AUTHORITY FOR MAINTENANCE OF THE SYSTEM:**

5 U.S.C. 301.

##### **ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:**

Record serves to identify the staffing plan for the bureau. The record will also reflect the current status of personnel actions for each employee. In addition, the record serves to identify an individual for office officials to contact, should an emergency of a medical or other nature involving the employee occur while the employee is on the job.



**POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:****STORAGE:**

Paper records are stored in file cabinets. Automated records are on computer media.

**RETRIEVABILITY:**

Records can be retrieved by name of individual employee.

**SAFEGUARDS:**

Records are maintained in a secured area and are available only to authorized personnel whose duties require access.

**RETENTION AND DISPOSAL:**

Records are maintained as long as the individual is an employee of FOB. Expired records are destroyed.

**SYSTEM MANAGER(S) AND ADDRESS:**

Administrative Office, FOB, FCC, 1919 M Street NW., Washington, DC 20554.

**NOTIFICATION PROCEDURE:**

Address inquiries to the system manager.

**RECORD ACCESS PROCEDURES:**

Address requests to the system manager.

**CONTESTING RECORD PROCEDURES:**

Same as above.

**RECORD SOURCE CATEGORIES:**

Employees and employee's supervisor.

**FCC/PRB-4****SYSTEM NAME:**

Private Radio Bureau Compliance.

**SYSTEM LOCATION:**

Federal Communications Commission (FCC), Private Radio Bureau, 2025 M Street NW., Washington, DC 20554.

**CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEMS:**

Licensees, applicants, and unlicensed persons under parts 80, 87, 90, 94, 95, and 97 of the rules about whom there are questions of compliance with the Commission's rules or the Communications Act of 1934. Unlicensed persons operating radio equipment.

**CATEGORIES OF RECORDS IN THE SYSTEM:**

Compliance case history logs; investigatory and hearing files with inspection reports, complaints, correspondence, pleadings, legal memoranda, investigative findings, forfeiture notices.

**AUTHORITY FOR MAINTENANCE OF THE SYSTEM:**

Title 47 U.S.C. 301, 303, 309(e), 312, 362, 364, 388, 507, and 510.

**ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSE OF SUCH USES:**

Used by bureau employees in compliance, rule waiver, and hearing cases to document, to evaluate, to impose sanctions for noncompliance with the rules or Act, and to grant waivers. Blanket routine uses Nos. 1-7 of the Prefatory Statement are applicable to this system.

**POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:****STORAGE:**

Case materials are in file folders. Logs are on cards, paper, and electromagnetic computer tape.

**RETRIEVABILITY:**

Records are filed and retrieved by name of licensee, applicant or unlicensed individual or call sign.

**SAFEGUARDS:**

Paper records are maintained on a division level in appropriate file cabinets in offices which are locked at the end of each business day. Access to computer records is controlled by password.

**RETENTION AND DISPOSAL:**

The documentation portions of these records are retained for 3 years after the case is closed and then destroyed.

**SYSTEM MANAGER(S) AND ADDRESS:**

Chief, Private Radio Bureau, FCC, 2025 M Street NW., Washington, DC 20554.

**NOTIFICATION PROCEDURE:**

Address inquiries to the system manager.

**RECORD ACCESS PROCEDURE:**

Address requests to the system manager.

**CONTESTING RECORD PROCEDURE:**

Same as above.

**RECORD SOURCE CATEGORIES:**

Information originates from various sources: FCC Field Engineers; private citizens; Department of Justice; other Commission personnel.

**SYSTEMS EXEMPTED FROM CERTAIN PROVISIONS OF THE ACT:**

Parts of this system of records are exempt from subsections (c)(3), (d), (e)(1), (e)(4) (G), (H) and (I), and (f) of the Privacy Act of 1974, 5 U.S.C. 552(a),

and from § 0.554-0.557 of the Commission's rules because such parts contain investigatory material compiled solely for law enforcement purposes pursuant to section 552(k)(2) of the Act.

**FCC/OIG-1****SYSTEM NAME:**

General Investigative Files.

**SECURITY CLASSIFICATION:**

Limited Access. Certain records or information in this system may be provided security safeguards equivalent to the protection of Top Secret classified information.

**SYSTEM LOCATION:**

Office of Inspector General, Federal Communications Commission, 1919 M Street NW., Washington, DC 20554.

**CATEGORIES OF INDIVIDUALS COVERED BY THE SYSTEM:**

Individuals and entities who are or have been the subjects of investigations conducted by the OIG, including present and former FCC employees, and other individuals and entities doing business with FCC.

**CATEGORIES OF RECORDS IN THE SYSTEM:**

Case files developed during investigations of known or alleged waste, fraud, and abuse, or other irregularities or violations of laws and regulations. Case files related to programs and operations administered or financed by the FCC, including contractors and others doing business with the FCC. Investigative files relating to FCC employees, hotline complaints, and other miscellaneous complaint files. Investigative reports and related documents, such as correspondence, notes, attachments, and working papers.

**AUTHORITY FOR MAINTENANCE OF THE SYSTEM:**

Inspector General Act of 1978, as amended by the Inspector General Act amendments of 1988 (Pub. L. No. 100-504, Oct. 18, 1988).

**PURPOSE(S):**

For the purpose of preventing or detecting waste, fraud, or abuse, conducting and supervising audits and investigations relating to programs and operations, informing the Chairman about problems and deficiencies in the Commission's programs and operations or suggesting corrective action in reference to identified irregularities, problems or deficiencies.



**ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:**

(a) A record within this system which includes information which indicates either by itself or in combination with other information within the agency's possession, a violation or potential violation of law, whether criminal, civil or regulatory in nature, and whether arising by general statute or particular program statute, or by regulation, rule or order issued pursuant thereto, may be disclosed as a routine use to the appropriate Federal, State, local or foreign agency or professional organization charged with the responsibility of investigating or prosecuting such violation or charged with enforcing, implementing, investigating, or prosecuting the particular statute, rule, regulation or order at issue.

(b) A record within this system which is derived from another FCC system of records may be disclosed in accord with the routine uses specified in the Federal Register notice for the system of records from which the record is derived.

(c) A record within this system may be disclosed, as a routine use, to any Federal agency responsible for considering suspension/debarment actions where such record would be relevant to a determination of the propriety/necessity for such an action.

(d) A record within this system may be disclosed, as a routine use, to any source, either private or governmental, to the extent necessary to secure from such source information relevant to and sought in furtherance of a legitimate investigation or audit.

(e) A record within this system may be disclosed, as a routine use, to a Federal, State, local, foreign or international agency, in connection with such entity's assignment, hiring or retention of an individual, issuance of a security clearance, reporting of an investigation of an individual, letting of a contract or issuance of a license, grant or other benefit, to the extent that the information is relevant and necessary to such agency's decision on the matter.

(f) A record within this system may be disclosed, as a routine use, to the Office of Government Ethics for any purpose consistent with that office's mission, including the compilation of statistical data.

(g) A record within this system may be disclosed, as a routine use, to the U.S. General Accounting Office and to the General Services Administration's Board of Contract Appeals in bid protest cases involving an agency procurement.

(h) A record within this system may be disclosed, as a routine use, to the

U.S. Department of Justice in order to obtain that department's advice regarding an agency's disclosure obligations under the Freedom of Information Act.

(i) A record within this system may be disclosed, as a routine use, to the Office of Management and Budget in order to obtain that office's advice regarding an agency's obligations under the Privacy Act.

(j) A record within this system may be disclosed, as a routine use, to a Member of Congress who submits an inquiry on behalf of an individual when the Member of Congress informs the appropriate agency official that the individual to whom the record pertains has authorized the Member of Congress to have access. In such cases, the member has no greater right to the record than does the individual.

(k) A record within this system may be disclosed, as a routine use, to a "consumer reporting agency" as that term is defined in the Fair Credit Reporting Act (15 U.S.C. 1681 a(f)) and the Federal Claims Collection Act of 1966 (31 U.S.C. 3701(a)(3)), for the purposes of obtaining information in the course of an investigation or audit.

(l) A record within this system may be disclosed in a proceeding before a court or adjudicative body before which the FCC is authorized to appear, or in the course of settlement negotiations with opposing counsel.

(m) A record within this system may be disclosed to the Department of Justice when—(1) the FCC, or any component thereof; or (2) any employee of the FCC in his or her official capacity; or (3) any employee of the FCC in his or her individual capacity, where the Department of Justice has agreed or is considering a request to represent the employee; or (4) the United States, where the FCC determines that litigation is likely to affect the FCC or any of its components—is a party to litigation or has an interest in such litigation, and the FCC determines that the use of such records by the Department of Justice is relevant and necessary to the litigation; provided, however, that in each case, the FCC determines that disclosure of the records to the Department of Justice is a use of the information contained in the records that is compatible with the purpose for which the records were collected.

**POLICIES AND PRACTICES FOR STORING, RETRIEVING, AND DISPOSING OF RECORDS IN THE SYSTEM:**

**STORAGE:**

The files are stored in file folders. All records are stored under secure conditions.

**RETRIEVABILITY:**

Records are filed alphabetically by name.

**SAFEGUARDS:**

Records are kept in file cabinets in offices that are secured at the end of each business day. Since only one or two staff persons routinely access this records system, unauthorized examination during business hours would be easily detected.

**RETENTION AND DISPOSAL:**

Records are covered by the National Archives and Records Administration's General Records Schedule 22. Investigative files containing information or allegations which are of an investigative nature but do not relate to a specific investigation are destroyed after 5 years from the date the record was established. All other investigative case files are placed in inactive file when case is closed. Files are retained for 10 years, then destroyed if no longer needed. Case files of internal audits of agency programs, operations, and procedures, and of external audits of contractors and grantees are destroyed after 8 years if no longer needed. Index references to investigative files are destroyed when superseded or obsolete. Disposition of records shall be in accordance with FCC Records Maintenance and Disposition System.

**SYSTEM MANAGER(S) AND ADDRESS:**

Inspector General, Office of Inspector General, Federal Communications Commission, 1919 M Street NW., Washington, DC 20554.

**NOTIFICATION PROCEDURES:**

During an investigation, information from other FCC systems of records may be incorporated into the case file. In certain instances, the incorporated information may be material which the Privacy Act permits an agency to exempt from certain provisions of the Act. See 5 U.S.C. 552a (j)(2); (k)(1), (2), (5). To the extent that such exempt material is incorporated into the case file, the Chairman of the Federal Communications Commission has determined that the material as it appears in this system should be exempted from subsections (c)(3), (d), (e)(1), (e)(4)(G), (H), (I) and (f), of the Privacy Act, pursuant to 5 U.S.C. 552a (j)(2) and (k)(2); and from subsections (c)(3) and (d) pursuant to 5 U.S.C. 552a (k)(1) and (5). To the extent that this system of records is not subject to exemption, it is subject to notification, access and contesting procedures. A determination as to the applicability of



an exemption as to a specific record shall be made at the time a request for notification, access, or contesting is received. Inquiries should be addressed to the system manager. Written requests should be clearly marked, "Privacy Act Request" on the envelope and letter. Include full name of the individual, some type of appropriate personal identification, and current address.

#### RECORDS ACCESS PROCEDURE:

Same as notification procedure above.

#### CONTESTING RECORDS PROCEDURES:

Same as above. The letter should state clearly and concisely what information is being contested, the reasons for contesting it, and the proposed amendment to the information sought.

#### RECORD SOURCE CATEGORIES:

(1) Federal, State, local or foreign government agencies concerned with the administration of criminal justice and non-law enforcement agencies both public and private; (2) Members of the public; (3) Government employees; (4) Published material; (5) Witnesses and informants.

#### SYSTEM EXEMPTED FROM CERTAIN PROVISIONS OF THE ACT:

During an investigation, information from other systems of records may be incorporated into the case file. In certain instances, the incorporated information may be material which the Privacy Act permits an agency to exempt from certain provisions of the Act. See 5 U.S.C. 552a (j)(2); (k)(1), (2), and (5). To the extent that such exempt material is incorporated into the investigative file, the Head of the Federal Communications Commission has determined that the material as it appears in this system should be exempted from subsections (c)(3), (d), (e)(1), (e)(4)(C), (H), (I), and (F), of the Privacy Act, pursuant to 5 U.S.C. 552a (j)(2) and (k)(2); and from subsections (c)(3) and (d) pursuant to 5 U.S.C. 552a (k)(1) and (5).

[FR Doc. 89-29255 Filed 12-19-89; 8:45 am]

BILLING CODE 6712-01-M

### FEDERAL RESERVE SYSTEM

#### CCNB Corp.; Acquisition of Company Engaged in Permissible Nonbanking Activities

The organization listed in this notice has applied under § 225.23 (a)(2) or (f) of the Board's Regulation Y (12 CFR 225.23 (a)(2) or (f)) for the Board's approval under section 4(c)(8) of the Bank Holding Company Act (12 U.S.C.

1843(c)(8)) and § 225.21(a) of Regulation Y (12 CFR 225.21(a)) to acquire or control voting securities or assets of a company engaged in a nonbanking activity that is listed in § 225.25 of Regulation Y as closely related to banking and permissible for bank holding companies. Unless otherwise noted, such activities will be conducted throughout the United States.

The application is available for immediate inspection at the Federal Reserve Bank indicated. Once the application has been accepted for processing, it will also be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing on the question whether consummation of the proposal can "reasonably be expected to produce benefits to the public, such as greater convenience, increased competition, or gains in efficiency that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices." Any request for a hearing on this question must be accompanied by a statement of the reasons a written presentation would not suffice in lieu of a hearing, identifying specifically any questions of fact that are in dispute, summarizing the evidence that would be presented at a hearing, and indicating how the party commenting would be aggrieved by approval of the proposal.

Comments regarding the application must be received at the Reserve Bank indicated or the offices of the Board of Governors not later than January 12, 1990.

**A. Federal Reserve Bank of Philadelphia** (Thomas K. Desch, Vice President), 100 North 6th Street, Philadelphia, Pennsylvania 19105:

1. *CCNB Corporation*, New Cumberland, Pennsylvania; to acquire Parent Federal Savings Bank, Lancaster, Pennsylvania, and thereby operate a savings association pursuant to § 225.25(b)(9); engage in mortgage banking activities pursuant to § 225.25(b)(1); and residential real estate appraising pursuant to § 225.25(b)(13) of the Board's Regulation Y.

Board of Governors of the Federal Reserve System, December 14, 1989.

**Jennifer J. Johnson**,  
Associate Secretary of the Board.

[FR Doc. 89-29541 Filed 12-19-89; 8:45 am]

BILLING CODE 6210-01-M

#### Change in Bank Control Notices; Acquisitions of Shares of Banks or Bank Holding Companies

The notificants listed below have applied under the Change in Bank Control Act (12 U.S.C. 1817(j)) and § 225.41 of the Board's Regulation Y (12 CFR 225.41) to acquire a bank or bank holding company. The factors that are considered in acting on the notices are set forth in paragraph 7 of the Act (12 U.S.C. 1817(j)(7)).

The notices are available for immediate inspection at the Federal Reserve Bank indicated. Once the notices have been accepted for processing, they will also be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing to the Reserve Bank indicated for that notice or to the offices of the Board of Governors. Comments must be received not later than January 5, 1989.

**A. Federal Reserve Bank of Boston** (Robert M. Brady, Vice President) 600 Atlantic Avenue, Boston, Massachusetts 02106:

1. *John A. Cocomo, Sr.*, Windsor, Connecticut; to acquire an additional 10.1 percent of the voting shares of *Olde Windsor Bancorp, Inc.*, Windsor, Connecticut, for a total of 20.0 percent, and thereby indirectly acquire *New England Bank and Trust Company*, Windsor, Connecticut.

**B. Federal Reserve Bank of Philadelphia** (Thomas K. Desch, Vice President) 100 North 6th Street, Philadelphia, Pennsylvania 19105:

1. *National Properties, Inc.*, Wayne, Pennsylvania; to acquire 10.13 percent of the voting shares of *BCB Financial Services Corporation*, Reading, Pennsylvania, and thereby indirectly acquire *Berks County Bank*, Reading, Pennsylvania.

**C. Federal Reserve Bank of Chicago** (David S. Epstein, Vice President) 230 South LaSalle Street, Chicago, Illinois 60690:

1. *Don P. Boggs*, Havana, Illinois; to acquire 100 percent of the voting shares of *Havana Bancshares, Inc.*, Havana, Illinois, and thereby indirectly acquire *State Bank of Havana*, Havana, Illinois.

**D. Federal Reserve Bank of Dallas** (W. Arthur Tribble, Vice President) 400 South Akard Street, Dallas, Texas 75222:

1. *Donald B. Hayes*, Austin, Texas; to acquire 10.28 percent of the voting shares of *Giddings Citizens State Bancshares, Inc.*, Giddings, Texas, and thereby indirectly acquire *Citizens State Bank*, Giddings, Texas.



Board of Governors of the Federal Reserve System, December 14, 1989.

Jennifer J. Johnson,  
Associate Secretary of the Board.

[FR Doc. 89-29542 Filed 12-19-89; 8:45 am]

BILLING CODE 6210-01-M

### National Penn Bancshares, Inc., et al.; Formations of, Acquisitions by, and Mergers of Bank Holding Companies

The companies listed in this notice have applied for the Board's approval under section 3 of the Bank Holding Company Act (12 U.S.C. 1842) and § 225.14 of the Board's Regulation Y (12 CFR 225.14) to become a bank holding company or to acquire a bank or bank holding company. The factors that are considered in acting on the applications are set forth in section 3(c) of the Act (12 U.S.C. 1842(c)).

Each application is available for immediate inspection at the Federal Reserve Bank indicated. Once the application has been accepted for processing, it will also be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing to the Reserve Bank or to the offices of the Board of Governors. Any comment on an application that requests a hearing must include a statement of why a written presentation would not suffice in lieu of a hearing, identifying specifically any questions of fact that are in dispute and summarizing the evidence that would be presented at a hearing.

Unless otherwise noted, comments regarding each of these applications must be received not later than January 5, 1990.

**A. Federal Reserve Bank of Philadelphia** (Thomas K. Desch, Vice President) 100 North 6th Street, Philadelphia, Pennsylvania 19105:

1. *National Penn Bancshares, Inc.*, Boyertown, Pennsylvania; to acquire 24.9 percent of the voting shares of Valley Community Bank, Kingston, Pennsylvania, a *de novo* bank.

**B. Federal Reserve Bank of St. Louis** (Randall C. Sumner, Vice President) 411 Locust Street, St. Louis, Missouri 63166:

1. *Farmers State Bancorporation, Inc.*, Hoffman, Illinois; to become a bank holding company by acquiring 100 percent of the voting shares of Farmers State Bank of Hoffman, Hoffman, Illinois.

2. *Sun Financial Corporation*, St. Louis, Missouri; to become a bank holding company by acquiring 100 percent of the voting shares of E Corporation, St. Louis, Missouri, and Farmers State Bank of Ellington, Missouri, Ellington, Missouri.

Board of Governors of the Federal Reserve System, December 14, 1989.

Jennifer J. Johnson,  
Associate Secretary of the Board.

[FR Doc. 89-29543 Filed 12-19-89; 8:45 am]

BILLING CODE 6210-01-M

### FEDERAL TRADE COMMISSION

[Docket No. 9213]

#### Illinois Cereal Mills, Inc.; Proposed Consent Agreement with Analysis To Aid Public Comment

**AGENCY:** Federal Trade Commission.

**ACTION:** Proposed consent agreement.

**SUMMARY:** In settlement of alleged violations of federal law prohibiting unfair acts and practices and unfair methods of competition, this consent agreement, accepted subject to final Commission approval, would prohibit, among other things, a manufacturer and seller of industrial dry corn milling products from acquiring industrial dry corn milling assets in the U.S., or interest in a U.S. industrial dry corn milling company, for a period of ten (10) years, without prior Commission approval.

**DATE:** Comments must be received on or before February 20, 1990.

**ADDRESS:** Comments should be directed to: FTC/Office of the Secretary, Room 159, 6th St. and Pa. Ave., NW., Washington, DC 20580.

**FOR FURTHER INFORMATION CONTACT:** Ronald B. Rowe, FTC/S-3302, Washington, DC 20580. (202) 326-2610.

**SUPPLEMENTARY INFORMATION:** Pursuant to section 6(f) of the Federal Trade Commission Act, 38 Stat. 721, 15 U.S.C. 46 and § 3.25(f) of the Commission's Rules of Practice (16 CFR 3.25(f)), notice is hereby given that the following consent agreement containing a consent order to cease and desist, having been filed with and accepted, subject to final approval, by the Commission, has been placed on the public record for a period of sixty (60) days. Public comment is invited. Such comments or views will be considered by the Commission and will be available for inspection and copying at its principal office in accordance with § 4.9(b)(6)(ii) of the Commission's Rules of Practice (16 CFR 4.9(b)(6)(ii)).

#### Agreement Containing Consent Order

The agreement herein, by and between Illinois Cereal Mills, Inc., a corporation, hereinafter sometimes referred to as respondent, by its duly authorized officer, and its attorney; and counsel for the Federal Trade Commission; is entered into in

accordance with the Commission's Rules of Practice governing consent order procedures. In accordance therewith the parties hereby agree that:

1. Respondent Illinois Cereal Mills, Inc. is a corporation organized, existing and doing business under and by virtue of the laws of the State of Delaware, with its office and principal place of business located at 616 South Jefferson Avenue, Paris, Illinois 61944.

2. Respondent has been served with a copy of the complaint issued by the Federal Trade Commission charging it with violation of section 5 of the Federal Trade Commission Act, 15 U.S.C. 45, and section 7 of the Clayton Act, as amended, 15 U.S.C. 18 and has filed answers to said complaint denying said charges.

3. Respondent admits all the jurisdictional facts set forth in the Commission's complaint in this proceeding.

4. Respondent waives:

(a) Any further procedural steps;

(b) The requirement that the Commission's decision contain a statement of findings of fact and conclusions of law;

(c) All rights to seek judicial review or otherwise to challenge or contest the validity of the order entered pursuant to this agreement; and

(d) Any claim under the Equal Access to Justice Act.

5. This agreement shall not become a part of the public record of the proceeding unless and until it is accepted by the Commission. If this agreement is accepted by the Commission it will be placed on the public record for a period of sixty (60) days and information in respect thereto publicly released. The Commission thereafter may either withdraw its acceptance of this agreement and so notify respondent, in which event it will take such action as it may consider appropriate, or issue and serve its decision, in disposition of the proceeding.

6. This agreement is for settlement purposes only and does not constitute an admission by respondent that the law has been violated as alleged in the complaint issued by the Commission.

7. This agreement contemplates that if it is accepted by the Commission, and if such acceptance is not subsequently withdrawn by the Commission pursuant to the provisions of Rule 3.25(f) of the Commission's Rules of Practice, the Commission may without further notice to respondent (1) issue its decision containing the following order to cease and desist in disposition of the proceeding and (2) make information



public in respect thereto. When so entered, the order to cease and desist shall have the same force and effect and may be altered, modified or set aside in the same manner and within the same time provided by statute for other orders. The order shall become final upon service. Delivery by the U.S. Postal Service of the complaint and decision containing the agreed-to order to respondent's address as stated in this agreement shall constitute service. Respondent waives any right it might have to any other manner of service. The complaint may be used in construing the terms of the order, and no agreement, understanding, representation, or interpretation not contained in the order or in the agreement may be used to vary or to contradict the terms of the order.

8. This agreement recognizes that the rescission ordered by the United States District Court for the Northern District of Illinois, Civil Action No. 88-2494, was accomplished.

9. Respondent has read the complaint and the order contemplated hereby. It understands that once the order has been issued, it will be required to file one or more compliance reports showing that it has fully complied with the order. Respondent further understands that it may be liable for civil penalties in the amount provided by law for each violation of the order after it becomes final.

## Order

### I. Definitions

*It is ordered* That, for purposes of this Order, the following definitions apply:

1. "Industrial dry corn milling industry" means firms engaged in the United States in the dry milling of yellow corn whereby degermed, milled and sifted grits of different sizes are produced for resale to food processors, brewers and industrial users. Dry corn mills that produce corn products in small packages solely for retail sale or in-the-home use are not in the industrial dry corn milling industry.

2. "Industrial dry corn milling assets" mean dry corn mills, equipment, machinery and rail hopper cars used to mill, sift or transport corn in connection with an industrial dry corn mill, and grain storage elevators that are owned or leased by the operator of an industrial dry corn mill. Corn is not an industrial dry corn milling asset.

3. "Respondent Illinois Cereal Mills, Inc." means Illinois Cereal Mills, Inc., its foreign and domestic parents, predecessors, subsidiaries, divisions, affiliates, partnerships and joint ventures controlled by Illinois Cereal

Mills, Inc., and their respective directors, officers, employees, agents, and representatives, and their respective successors and assigns.

### II. Prior Approval for Acquisitions

*It is further ordered* That Respondent Illinois Cereal Mills, Inc., for a period of ten (10) years from the date this order becomes final, shall not acquire or lease, directly or indirectly, without the prior approval of the Commission, industrial dry corn milling assets of any company in the industrial dry corn milling industry, or the whole or any part of the stock, share capital or equity interest of any company in the industrial dry corn milling industry;

*Provided, however,* That prior approval is not required for the acquisition by Respondent Illinois Cereal Mills, Inc. of industrial dry corn milling assets that are either:

(1) Acquired from a single seller (including all parents, predecessors, subsidiaries, divisions, partnerships, joint ventures and affiliates thereof) if the total price of such assets acquired in any twelve-month period is less than one hundred thousand dollars (\$100,000); or

(2) Acquired from a single seller (including all parents, predecessors, subsidiaries, divisions, partnerships, joint ventures and affiliates thereof) if the total price of such assets acquired is less than five hundred thousand dollars (\$500,000), and thirty (30) days prior written notice of the details of the proposed transaction is given to the Commission. The prior notice shall include the following information: (a) A full description of the assets to be acquired, (b) an identification of the proposed seller, (c) copies of all management documents discussing the proposed acquisition, and (d) copies of all proposed acquisition agreements and all drafts thereof. In the event representatives of the Federal Trade Commission request additional documents or information in writing within the thirty (30) days waiting period, Respondent Illinois Cereal Mills, Inc. shall not consummate the proposed acquisition until twenty (20) days after submitting the requested additional documents or information. Respondent Illinois Cereal Mills, Inc. may request early termination of either waiting period.

### III. Other Obligations

*It is further ordered* That Respondent Illinois Cereal Mills, Inc. shall notify the Commission at least thirty (30) days prior to any proposed change in the respondent such as dissolution, assignment or sale resulting in the

emergence of a successor corporation, the creation or dissolution of subsidiaries or any other change that may affect compliance obligations arising out of the Order.

*It is further ordered* That Respondent Illinois Cereal Mills, Inc., shall file with the Commission a verified report in writing within thirty (30) days after the date this Order becomes final, setting forth in detail:

(1) The manner and form in which it has complied and is complying with this Order; and

(2) The manner and form in which it has complied with the rescission order of the United States District Court for the Northern District of Illinois in Civil Action No. 88-2494.

### Analysis of Proposed Consent Order To Aid Public Comment

The Federal Trade Commission has accepted for comment from Illinois Cereal Mills, Inc. ("Illinois Cereal") an agreement containing consent order. This agreement has been placed on the public record for sixty (60) days for reception of comments from interested persons.

Comments received during this period will become part of the public record. After sixty days, the Commission will again review the agreement and comments received, and will decide whether it should withdraw from the agreement or make final the order contained in the agreement.

According to the Commission's June 30, 1988, complaint, Illinois Cereal and Elders are competitors nationwide in the manufacture and sale of industrial dry corn milling products. These products include flaking grits, used to make corn flakes; brewer's grits, used as an adjunct in the brewing process; corn meal, used in snack foods and mixes; and corn flour, used in a wide variety of food applications.

The Commission's complaint charged that on June 5, 1988, pursuant to a prior agreement, Illinois Cereal acquired the dry corn milling assets of Elders. The Commission had reason to believe that the acquisition, and the agreement to enter into the acquisition, would have anticompetitive effects and be in violation of section 7 of the Clayton Act and section 5 of the Federal Trade Commission Act.

When the Commission learned of the acquisition on June 6, 1988, it sought an order from the United States District Court for the Northern District of Illinois, Eastern Division, to rescind the acquisition pending the completion of administrative proceedings on the legality of the transaction. The Court



issued a rescission order on June 24, 1988. The order was affirmed by the United States Court of Appeals for the Seventh Circuit on January 30, 1989. Illinois Cereal and Elders rescinded their transaction on March 14, 1989.

The agreement containing consent order recognizes that the court ordered rescission was accomplished. If issued by the Commission, the proposed consent order would guard against possible future anticompetitive acquisitions by Illinois Cereal. Under the terms of the proposed order, for a period of ten (10) years from its effective date, Illinois Cereal may not acquire industrial dry corn milling assets in the United States, or an interest in a United States industrial dry corn milling company, without the prior approval of the Commission. Prior Commission approval is not required for purchases of less than \$100,000 worth of equipment of a competitor in any twelve month period. Prior Commission approval is also not required if the acquired assets cost less than \$500,000 and the Commission was provided 30 days prior notice of the details of the transaction.

By accepting the consent order subject to final approval, the Commission anticipates that the competitive problems alleged in the complaint will be resolved. The purpose of this analysis is to invite and facilitate public comment concerning the consent order. It is not intended to constitute an official interpretation of the agreement and proposed order or in any way to modify their terms.

Benjamin I. Berman,  
Acting Secretary.

[FR Doc. 89-29574 Filed 12-19-89; 8:45 am]  
BILLING CODE 6750-01-M

## DEPARTMENT OF HEALTH AND HUMAN SERVICES

### National Institutes of Health, Public Health Service

#### New Treatment Strategies for Alzheimer's Disease Conference

Notice is hereby given of the "NIA New Treatment Strategies for Alzheimer's Disease" conference co-sponsored by the National Institute on Aging (NIA), the Sigma Tau Foundation and the Alzheimer's Association. The conference will be held on January 9-10, 1990, in Conference Room #10, Building 31C, 6th Floor, at the National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland, 20892. Information on the program may be obtained from: G. Bohler, NIA/NNA, 9000 Rockville Pike,

Room 5C35, Building 31C, Bethesda, Maryland, 20892, (301) 496-9350.

Dated: December 13, 1989.

William F. Raub,

Acting Director, NIH.

[FR Doc. 89-29493 Filed 12-19-89; 8:45 am]

BILLING CODE 4140-01-M

## Office of the Assistant Secretary for Health

### Establishment; Scientific Integrity Advisory Committee

Pursuant to the Federal Advisory Committee Act, Public Law 92-463 (5 U.S.C. Appendix II), the Office of the Assistant Secretary for Health (OASH) announces the establishment by the Secretary, DHHS, of the Advisory Committee on Scientific Integrity on December 2, 1989, pursuant to 42 U.S.C. 217a, section 222 of the Public Health Service Act, as amended.

*Designation:* Advisory Committee on Scientific Integrity.

*Purpose:* Provides advice to the Secretary of Health and Human Services and the Assistant Secretary for Health on issues that relate to the Department's activities in detecting, deterring, investigating, and resolving allegations of misconduct in science.

Unless renewed by appropriate action prior to its expiration, this committee will terminate on December 2, 1991.

Dated: December 7, 1989.

Lyle W. Bivens,

Acting Director, Office of Scientific Integrity Review.

[FR Doc. 89-29565 Filed 12-19-89; 8:45 am]

BILLING CODE 4160-17-M

## DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

### Office of the Secretary

[Docket No. N-89-2092; FR-2719]

#### Prohibition on Use of Federal Funds for Lobbying; Requirements for Disclosure Statements

**AGENCY:** Office of the Secretary, HUD.

**ACTION:** Notice.

**SUMMARY:** The purpose of this Notice is to advise recipients and subrecipients of Federal contracts, grants, cooperative agreements, and loans of the prohibition recently mandated by Congress regarding the use of Federal funds for lobbying Congress or any Federal agency in connection with the award of a particular contract, grant, cooperative agreement, or loan.

**EFFECTIVE DATE:** December 20, 1989.

**FOR FURTHER INFORMATION CONTACT:** Edward L. Girovasi, Jr., Director, Policy and Evaluation Division, Office of Procurement and Contracts, Department of Housing and Urban Development, 451 Seventh Street, SW., Washington, DC 20410-3500, telephone (202) 755-5294. (This is not a toll-free number.)

**SUPPLEMENTARY INFORMATION:** Section 1352 of Public Law 101-121, signed into law on October 23, 1989, imposes new prohibitions and requirements for disclosure and certification related to lobbying on recipients of Federal contracts, grants, cooperative agreements, and loans. Certain provisions of the law also apply to Federal commitments for loan guarantees and insurance; however, it provides exemptions for Indian tribes and tribal organizations.

Effective December 23, 1989, current and prospective recipients (and their subtier contractors or subgrantees) will be prohibited from using Federal funds, other than profits from a Federal contract, for lobbying Congress or any Federal agency in connection with the award of a particular contract, grant, cooperative agreement, or loan. In addition, for each award action in excess of \$100,000 (or \$150,000 for loans) on or after December 23, the law requires recipients and their subtier contractors or subgrantees (1) to certify that they have neither used nor will use any appropriated funds for payment to lobbyists, (2) to disclose the name, address, payment details, and purpose of any agreements with lobbyists whom recipients or their subtier contractors or subgrantees will pay with profits or nonappropriated funds on or after December 23, and (3) to file quarterly up-dates about the use of lobbyists if material changes occur in their use. The law establishes civil penalties for noncompliance.

On or before December 23, the Office of Management and Budget will issue guidance for implementing and complying with the law. Sometime later, the provisions of the law will be put into regulation through the governmentwide common rule process.

If you are a current recipient of Federal funding or have an application, proposal, or bid pending as of December 23:

- You are prohibited from using appropriated funds (other than profits from Federal contracts) on or after December 23 for lobbying Congress or any Federal agency in connection with a particular contract, grant, cooperative agreement, or loan;



• You will be required to execute the required certification at the time of or before any future award action in excess of \$100,000 (\$150,000 for loans); and

• You will be required to complete the lobbying disclosure form if the disclosure requirements apply to you.

This notification is being published for purposes of information only. You are not required to take any action at this time other than to assure that appropriated funds (other than profits) are not used for lobbying in connection with a particular award on or after December 23, 1989. The Department of Housing and Urban Development will provide you with the appropriate forms if and when an award action or loan in excess of the \$100,000/\$150,000 thresholds is anticipated.

Dated: December 14, 1989.

Jack Kemp,  
Secretary.

[FR Doc. 89-29576 Filed 12-19-89; 8:45 am]

BILLING CODE 4210-32-M

## DEPARTMENT OF THE INTERIOR

### Bureau of Indian Affairs

#### List of Rejected Statute of Limitations Claims

**AGENCY:** Bureau of Indian Affairs, Interior.

**ACTION:** Notice of rejected claims.

**SUMMARY:** This notice lists certain potential pre-1966 Indian damage claims which have been rejected for litigation by the Secretary of the Interior pursuant to the Indian Claims Limitation Act of 1982. This notice also contains a list of claims which the Bureau of Indian Affairs considers resolved.

**DATE:** To file an action in court, on any claim contained on the list of rejected claims, tribes, groups, and individual Indians must file such action no later than December 20, 1990.

#### FOR FURTHER INFORMATION CONTACT:

Aberdeen Area Director, Bureau of Indian Affairs, 115 4th Avenue SE., Aberdeen, South Dakota 57401-4382, telephone (605) 226-7343;

Albuquerque Area Director, Bureau of Indian Affairs, 615 1st Street NW., Box 26567, Albuquerque, New Mexico 87125-6567, telephone (505) 766-3170;

Anadarko Area Director, Bureau of Indian Affairs, WCD Office Complex, Box 368, Anadarko, Oklahoma 73005-0368, telephone (405) 247-8673;

Billings Area Director, Bureau of Indian Affairs, 316 North 26th Street, Billings, Montana 59101-1397, telephone (406) 657-6315;

Eastern Area Director, Bureau of Indian Affairs, 1951 Constitution Avenue NW., MS 711-Broyhill Building, Washington, DC 20245-0001, telephone (703) 2325-2571;

Juneau Area Director, Bureau of Indian Affairs, Federal Building, P.O. Box 3-8000, Juneau, Alaska 99802-1219, telephone (907) 586-7177;

Minneapolis Area Director, Bureau of Indian Affairs, 15 South 5th Street—10th Floor, Minneapolis, Minnesota 55401-1020, telephone (612) 349-3631;

Navajo Area Director, Bureau of Indian Affairs, P.O. Box M, Window Rock, Arizona 86515-0714, telephone (505) 863-9501;

Phoenix Area Director, Bureau of Indian Affairs, 1 North First Street, P.O. Box 10, Phoenix, Arizona 85001-0010, telephone (602) 241-2305;

Portland Area Director, Bureau of Indian Affairs, Federal Building West, 1002 NE Holladay Street, P.O. Box 3785, Portland, Oregon 97232-4182, telephone (503) 231-6702;

Sacramento Area Director, Bureau of Indian Affairs, 2800 Cottage Way, Sacramento, California 95825-1884, telephone (916) 978-4691.

**SUPPLEMENTARY INFORMATION:** The Indian Claims Limitation Act of 1982, Pub. L. 97-394 (96 Stat. 1966, 1976) extends the statute of limitations governing pre-1966 Indian damage claims (28 U.S.C. 2415) which was due to expire on December 31, 1982. A claim subject to the statute of limitations is an Indian claim for money damages which arose prior to July 18, 1966. Claims against the United States are not governed by this law, only money damage claims against persons, corporations, States, or any other entities except the Federal Government. Claims for title to land are also not governed by this statute of limitations. This notice is required by section 5(c) of the Act.

Pursuant to sections 3 and 4 of the Indian Claims Limitation Act of 1982,

lists of all potential Indian damage claims, which had at any time been identified by or submitted to the Bureau of Indian Affairs under the Department of the Interior's Statute of Limitations Program, were published in the *Federal Register* at 48 FR 13698, on March 31, 1983, amended at 48 FR 15008, on April 6, 1983; and at 48 FR 51204, on November 7, 1983, amended at 49 FR 518, on January 4, 1984. Excluded from these lists were claims which were erroneously identified as claims and those which had no legal merit whatsoever.

When rejecting any claim or category of claims included on the published lists, the Secretary must send a report to the appropriate tribe whose rights or the rights of whose members could be affected by the rejection. The report must identify each separate claim being rejected; list the names of potential plaintiffs and defendants, if known or reasonably ascertainable; and briefly set forth the reason or reasons for rejection. A written notice of rejection must be sent to individual Indian claimants if their identities and addresses are known or reasonably ascertainable from Bureau of Indian Affairs records. After a report has been forwarded to a tribe, the Secretary must publish a notice in the *Federal Register* identifying the claims covered in the report. By the terms of the Indian Claims Limitation Act of 1982, any right of action on any claim appearing on the following list of claims, which have been rejected and reported accordingly by the Secretary, shall be barred unless a complaint is filed in accordance with date established in the "DATE" section of this notice. A list of claims which the Bureau of Indian Affairs considers resolved follows the list of rejected claims.

This notice is published in the exercise of authority delegated by the Secretary of the Interior to the Assistant Secretary—Indian Affairs by 209 DM 8.

Dated: December 12, 1989.

Patrick A. Hayes,

Acting Assistant Secretary—Indian Affairs.

BILLING CODE 4310-02-M



## ABERDEEN AREA REJECTED CLAIMS:

A073451899 A083460253

## JUNEAU AREA REJECTED CLAIMS:

E000000005	E000000012	E000000017	E000000037	E000000049	E000000063
E000000008	E000000013	E000000018	E000000043	E000000061	E000000065
E000000010	E000000015	E000000029			

## MUSKOGEE AREA REJECTED CLAIMS:

G039060002	G089050019	G089050106	G089050366	G089050222	G089050369
G039060004	G089050021	G089050107	G089050178	G089050223	G089050370
G039060004A	G089050024	G089050110	G089050179	G089050224	G089050376
G039060004B	G089050026	G089050111	G089050180	G089050225	G089050377
G039060009	G089050027	G089050112	G089050181	G089050228	G089050378
G039060027	G089050034	G089050113	G089050182	G089050243	G089050379
G039060027A	G089050036	G089050114	G089050183	G089050244	G089050389
G039060027B	G089050037	G089050115	G089050184	G089050281	G089050391
G039060027C	G089050038	G089050119	G089050185	G089050293	G089050391A
G039060027D	G089050039	G089050120	G089050186	G089050294	G089050391B
G039060031	G089050040	G089050121	G089050187	G089050295	G089050391C
G039060031A	G089050042	G089050127	G089050188	G089050300	G089050392
G079080027	G089050050	G089050128	G089050189	G089050306	G089050393
G079080038	G089050054	G089050129	G089050191	G089050308	G089050398
G079080039	G089050063	G089050132	G089050192	G089050309	G089050403
G079080040	G089050064	G089050133	G089050193	G089050314	G089050423
G079080040A	G089050065	G089050138	G089050194	G089050316	G089050424
G079080040B	G089050066	G089050139	G089050194A	G089050318	G089050448
G079080050	G089050068	G089050140	G089050195	G089050319	G099070005
G079080060	G089050072	G089050141	G089050197	G089050320	G099070014
G079080065	G089050075	G089050143	G089050198	G089050323	G099070018
G079080065A	G089050077	G089050146	G089050200	G089050324	G099070024
G079080065B	G089050079	G089050148	G089050201	G089050325	G099070025
G079080071	G089050080	G089050150	G089050203	G089050325A	G099070049
G079080084	G089050081	G089050151	G089050205	G089050326	G099070063
G079080091	G089050083	G089050152	G089050206	G089050326A	G099070064
G079080092	G089050085	G089050154	G089050207	G089050330	G099070066
G079080102	G089050086	G089050155	G089050208	G089050332	G099070094
G089050003	G089050087	G089050156	G089050209	G089050333	G099070118
G089050004	G089050088	G089050157	G089050210	G089050345	G099070128
G089050007	G089050090	G089050159	G089050211	G089050348	G099070128A
G089050008	G089050091	G089050160	G089050212	G089050349	G099070131
G089050010	G089050093	G089050161	G089050213	G089050350	G099070136
G089050011	G089050094	G089050164	G089050214	G089050351	G099070140
G089050012	G089050095	G089050165	G089050215	G089050352	G099070146
G089050013	G089050097	G089050166	G089050216	G089050353	G099070147
G089050014	G089050098	G089050167	G089050217	G089050354	G099070151
G089050014A	G089050099	G089050168	G089050218	G089050355	G099070152
G089050015	G089050100	G089050171	G089050219	G089050356	G099070153
G089050016	G089050101	G089050174	G089050220	G089050364	G099070154
G089050017	G089050103	G089050176	G089050221	G089050368	G109090005
G089050018	G089050105	G089050177			

## PHOENIX AREA REJECTED CLAIMS:

H516030068	H516030071	H516030073	H516030075	H516030169	H686740126
H516030069	H516030072	H516030074	H516030076	H686740125	H686740129
H516030070					



SACRAMENTO AREA REJECTED CLAIMS:  
J505400107

## PORTLAND AREA REJECTED CLAIMS:

P000000325	P001400052	P001400104	P001400156	P001400208	P001400260
P001400001	P001400053	P001400105	P001400157	P001400209	P001400261
P001400002	P001400054	P001400106	P001400158	P001400210	P001400262
P001400003	P001400055	P001400107	P001400159	P001400211	P001400263
P001400004	P001400056	P001400108	P001400160	P001400212	P001400264
P001400005	P001400057	P001400109	P001400161	P001400213	P001400265
P001400006	P001400058	P001400110	P001400162	P001400214	P001400266
P001400007	P001400059	P001400111	P001400163	P001400215	P001400267
P001400008	P001400060	P001400112	P001400164	P001400216	P001400268
P001400009	P001400061	P001400113	P001400165	P001400217	P001400269
P001400010	P001400062	P001400114	P001400166	P001400218	P001400270
P001400011	P001400063	P001400115	P001400167	P001400219	P001400271
P001400012	P001400064	P001400116	P001400168	P001400220	P001400272
P001400013	P001400065	P001400117	P001400169	P001400221	P001400273
P001400014	P001400066	P001400118	P001400170	P001400222	P001400274
P001400015	P001400067	P001400119	P001400171	P001400223	P001400275
P001400016	P001400068	P001400120	P001400172	P001400224	P001400276
P001400017	P001400069	P001400121	P001400173	P001400225	P001400277
P001400018	P001400070	P001400122	P001400174	P001400226	P001400278
P001400019	P001400071	P001400123	P001400175	P001400227	P001400279
P001400020	P001400072	P001400124	P001400176	P001400228	P001400280
P001400021	P001400073	P001400125	P001400177	P001400229	P001400281
P001400022	P001400074	P001400126	P001400178	P001400230	P001400282
P001400023	P001400075	P001400127	P001400179	P001400231	P001400283
P001400024	P001400076	P001400128	P001400180	P001400232	P001400284
P001400025	P001400077	P001400129	P001400181	P001400233	P001400285
P001400026	P001400078	P001400130	P001400182	P001400234	P001400286
P001400027	P001400079	P001400131	P001400183	P001400235	P001400287
P001400028	P001400080	P001400132	P001400184	P001400236	P001400288
P001400029	P001400081	P001400133	P001400185	P001400237	P001400289
P001400030	P001400082	P001400134	P001400186	P001400238	P001400290
P001400031	P001400083	P001400135	P001400187	P001400239	P001400291
P001400032	P001400084	P001400136	P001400188	P001400240	P001400292
P001400033	P001400085	P001400137	P001400189	P001400241	P001400293
P001400034	P001400086	P001400138	P001400190	P001400242	P001400294
P001400035	P001400087	P001400139	P001400191	P001400243	P001400295
P001400036	P001400088	P001400140	P001400192	P001400244	P001400296
P001400037	P001400089	P001400141	P001400193	P001400245	P001400297
P001400038	P001400090	P001400142	P001400194	P001400246	P001400298
P001400039	P001400091	P001400143	P001400195	P001400247	P001400299
P001400040	P001400092	P001400144	P001400196	P001400248	P001400300
P001400041	P001400093	P001400145	P001400197	P001400249	P001400301
P001400042	P001400094	P001400146	P001400198	P001400250	P001400302
P001400043	P001400095	P001400147	P001400199	P001400251	P001400303
P001400044	P001400096	P001400148	P001400200	P001400252	P001400304
P001400045	P001400097	P001400149	P001400201	P001400253	P001400305
P001400046	P001400098	P001400150	P001400202	P001400254	P001400306
P001400047	P001400099	P001400151	P001400203	P001400255	P001400307
P001400048	P001400100	P001400152	P001400204	P001400256	P001400308
P001400049	P001400101	P001400153	P001400205	P001400257	P001400309
P001400050	P001400102	P001400154	P001400206	P001400258	P001400310
P001400051	P001400103	P001400155	P001400207	P001400259	P001400311



## PORTLAND AREA REJECTED CLAIMS (CONTINUED):

P001400312	P001400368	P001400424	P011420042	P011420098	P011420154
P001400313	P001400369	P001400425	P011420043	P011420099	P011420155
P001400314	P001400370	P001410001	P011420044	P011420100	P011420156
P001400315	P001400371	P001410002	P011420045	P011420101	P011420157
P001400316	P001400372	P001410003	P011420046	P011420102	P011420158
P001400317	P001400373	P001410004	P011420047	P011420103	P011420159
P001400318	P001400374	P001410005	P011420048	P011420104	P011420160
P001400319	P001400375	P001410006	P011420049	P011420105	P011420161
P001400320	P001400376	P001410007	P011420050	P011420106	P011420162
P001400321	P001400377	P001410008	P011420051	P011420107	P011420163
P001400322	P001400378	P001410009	P011420052	P011420108	P011420164
P001400323	P001400379	P001410010	P011420053	P011420109	P011420165
P001400324	P001400380	P001410011	P011420054	P011420110	P011420166
P001400325	P001400381	P001410012	P011420055	P011420111	P011420167
P001400326	P001400382	P001410013	P011420056	P011420112	P011420168
P001400327	P001400383	P011420001	P011420057	P011420113	P011420169
P001400328	P001400384	P011420002	P011420058	P011420114	P011420170
P001400329	P001400385	P011420003	P011420059	P011420115	P011420171
P001400330	P001400386	P011420004	P011420060	P011420116	P011420172
P001400331	P001400387	P011420005	P011420061	P011420117	P011420173
P001400332	P001400388	P011420006	P011420062	P011420118	P011420174
P001400333	P001400389	P011420007	P011420063	P011420119	P011420175
P001400334	P001400390	P011420008	P011420064	P011420120	P011420176
P001400335	P001400391	P011420009	P011420065	P011420121	P011420177
P001400336	P001400392	P011420010	P011420066	P011420122	P011420178
P001400337	P001400393	P011420011	P011420067	P011420123	P011420179
P001400338	P001400394	P011420012	P011420068	P011420124	P011420180
P001400339	P001400395	P011420013	P011420069	P011420125	P011420181
P001400340	P001400396	P011420014	P011420070	P011420126	P011420182
P001400341	P001400397	P011420015	P011420071	P011420127	P011420183
P001400342	P001400398	P011420016	P011420072	P011420128	P011420184
P001400343	P001400399	P011420017	P011420073	P011420129	P011420185
P001400344	P001400400	P011420018	P011420074	P011420130	P011420186
P001400345	P001400401	P011420019	P011420075	P011420131	P011420187
P001400346	P001400402	P011420020	P011420076	P011420132	P011420188
P001400347	P001400403	P011420021	P011420077	P011420133	P011420189
P001400348	P001400404	P011420022	P011420078	P011420134	P011420190
P001400349	P001400405	P011420023	P011420079	P011420135	P011420191
P001400350	P001400406	P011420024	P011420080	P011420136	P011420192
P001400351	P001400407	P011420025	P011420081	P011420137	P011420193
P001400352	P001400408	P011420026	P011420082	P011420138	P011420194
P001400353	P001400409	P011420027	P011420083	P011420139	P011420195
P001400354	P001400410	P011420028	P011420084	P011420140	P011420196
P001400355	P001400411	P011420029	P011420085	P011420141	P011420197
P001400356	P001400412	P011420030	P011420086	P011420142	P011420198
P001400357	P001400413	P011420031	P011420087	P011420143	P011420199
P001400358	P001400414	P011420032	P011420088	P011420144	P011420200
P001400359	P001400415	P011420033	P011420089	P011420145	P011420201
P001400360	P001400416	P011420034	P011420090	P011420146	P011420202
P001400361	P001400417	P011420035	P011420091	P011420147	P011420203
P001400362	P001400418	P011420036	P011420092	P011420148	P011420204
P001400363	P001400419	P011420037	P011420093	P011420149	P011420205
P001400364	P001400420	P011420038	P011420094	P011420150	P011420206
P001400365	P001400421	P011420039	P011420095	P011420151	P011420207
P001400366	P001400422	P011420040	P011420096	P011420152	P011420208
P001400367	P001400423	P011420041	P011420097	P011420153	P011420209



## PORTLAND AREA CLAIMS (CONTINUED):

P011420210	P011420236	P061170021	P091440015	P091440047	P101110003F
P011420211	P011420237	P061170030	P091440016	P091440048	P101110003G
P011420212	P011420238	P061170031	P091440017	P091440049	P101110004A
P011420213	P011420239	P061170034	P091440019	P091440050	P101110004C
P011420214	P011420240	P061170051	P091440020	P091440051	P101110004D
P011420215	P011420241	P061180004	P091440021	P091440052	P101110004E
P011420216	P011420242	P061180005	P091440022	P091450019	P101110004F
P011420217	P011420243	P061180006	P091440023	P091450020	P101110004G
P011420218	P011420245	P061180007	P091440024	P091450021	P101110004H
P011420219	P011420246	P061200007	P091440025	P091470001	P101110004I
P011420220	P031010010	P061200011	P091440026	P101090013	P101110004J
P011420221	P031010010A	P061200012	P091440027	P101090017	P101110004K
P011420222	P031010263	P061210003	P091440029	P101100003	P101110016
P011420223	P031010265	P061210004	P091440031	P101100008	P101110019
P011420224	P061080004	P061210005	P091440032	P101100013	P101110027
P011420225	P061170008	P061210006	P091440033	P101100015	P101140006
P011420226	P061170009	P061210008	P091440035	P101100017	P101140011
P011420227	P061170010	P061250005	P091440036	P101100018	P101220011
P011420228	P061170011	P061300012	P091440039	P101100019	P101220013
P011420229	P061170012	P071430005	P091440040	P101100021	P101230005
P011420230	P061170013	P071430028	P091440041	P101110003	P101230008
P011420231	P061170015	P071430091	P091440042	P101110003A	P101230014
P011420232	P061170017	P071430092	P091440043	P101110003B	P101230017
P011420233	P061170018	P091440012	P091440045	P101110003C	P101300014
P011420234	P061170019	P091440013	P091440046	P101110003E	P101300015
P011420235	P061170019A	P091440014			



## PORTLAND AREA REJECTED CLAIMS (CONTINUED):

P011420210	P011420236	P061170021	P091440015	P091440047	P101110003F
P011420211	P011420237	P061170030	P091440016	P091440048	P101110003G
P011420212	P011420238	P061170031	P091440017	P091440049	P101110004A
P011420213	P011420239	P061170034	P091440019	P091440050	P101110004C
P011420214	P011420240	P061170051	P091440020	P091440051	P101110004D
P011420215	P011420241	P061180004	P091440021	P091440052	P101110004E
P011420216	P011420242	P061180005	P091440022	P091450019	P101110004F
P011420217	P011420243	P061180006	P091440023	P091450020	P101110004G
P011420218	P011420245	P061180007	P091440024	P091450021	P101110004H
P011420219	P011420246	P061200007	P091440025	P091470001	P101110004I
P011420220	P031010010	P061200011	P091440026	P101090013	P101110004J
P011420221	P031010010A	P061200012	P091440027	P101090017	P101110004K
P011420222	P031010263	P061210003	P091440029	P101100003	P1011100016
P011420223	P031010265	P061210004	P091440031	P101100008	P1011100019
P011420224	P061080004	P061210005	P091440032	P101100013	P1011100027
P011420225	P061170008	P061210006	P091440033	P101100015	P101140006
P011420226	P061170009	P061210008	P091440035	P101100017	P101140011
P011420227	P061170010	P061250005	P091440036	P101100018	P101220011
P011420228	P061170011	P061300012	P091440039	P101100019	P101220013
P011420229	P061170012	P071430005	P091440040	P101100021	P101230005
P011420230	P061170013	P071430028	P091440041	P101110003	P101230008
P011420231	P061170015	P071430091	P091440042	P101110003A	P101230014
P011420232	P061170017	P071430092	P091440043	P101110003B	P101230017
P011420233	P061170018	P091440012	P091440045	P101110003C	P101300014
P011420234	P061170019	P091440013	P091440046	P101110003E	P101300015
P011420235	P061170019A	P091440014			

## RESOLVED CLAIMS:

## ABERDEEN AREA RESOLVED CLAIMS:

A073450001	A073450027	A073450053	A073450087	A073450112	A073450145
A073450002	A073450028	A073450054	A073450088	A073450113	A073450146
A073450003	A073450030	A073450055	A073450089	A073450114	A073450147
A073450004	A073450031	A073450056	A073450090	A073450115	A073450149
A073450005	A073450032	A073450057	A073450091	A073450116	A073450150
A073450006	A073450033	A073450058	A073450092	A073450117	A073450152
A073450007	A073450034	A073450059	A073450093	A073450118	A073450153
A073450008	A073450035	A073450062	A073450094	A073450119	A073450154
A073450009	A073450036	A073450063	A073450095	A073450120	A073450155
A073450010	A073450037	A073450065	A073450096	A073450122	A073450156
A073450011	A073450038	A073450066	A073450097	A073450123	A073450157
A073450012	A073450039	A073450067	A073450098	A073450125	A073450158
A073450013	A073450040	A073450068	A073450099	A073450126	A073450159
A073450014	A073450041	A073450069	A073450100	A073450128	A073450160
A073450015	A073450042	A073450070	A073450101	A073450129	A073450161
A073450016	A073450043	A073450072	A073450102	A073450131	A073450162
A073450017	A073450044	A073450074	A073450103	A073450132	A073450163
A073450018	A073450045	A073450075	A073450104	A073450133	A073450164
A073450019	A073450046	A073450076	A073450105	A073450134	A073450165
A073450020	A073450047	A073450077	A073450106	A073450135	A073450167
A073450021	A073450048	A073450078	A073450107	A073450136	A073450168
A073450022	A073450049	A073450082	A073450108	A073450137	A073450169
A073450023	A073450050	A073450084	A073450109	A073450139	A073450170
A073450025	A073450051	A073450085	A073450110	A073450140	A073450172
A073450026	A073450052	A073450086	A073450111	A073450142	A073450173



## ABERDEEN AREA RESOLVED CLAIMS (CONTINUED):

A073450174	A073450208	A073450237	A073450268	A133800318	A133830123
A073450176	A073450209	A073450238	A073450269	A133800319	A133830125
A073450177	A073450210	A073450239	A073450270	A133800320	A153430002
A073450178	A073450211	A073450240	A073450271	A133800321	A153430003
A073450180	A073450212	A073450241	A073450272	A133800322	A153430004
A073450181	A073450213	A073450242	A073450273	A133800323	A153430005
A073450182	A073450215	A073450243	A073450274	A133800324	A153430006
A073450184	A073450216	A073450244	A073450275	A133800325	A153430007
A073450187	A073450217	A073450246	A073450276	A133820134	A153430010
A073450188	A073450218	A073450247	A073450277	A133820135	A153430011
A073450190	A073450219	A073450248	A073450278	A133820136	A153430012
A073450191	A073450220	A073450249	A073450279	A133820137	A153430013
A073450192	A073450221	A073450252	A073450280	A133820138	A153430014
A073450193	A073450222	A073450254	A073450281	A133820139	A153430016
A073450196	A073450223	A073450255	A073450286	A133820140	A153430017
A073450197	A073450224	A073450256	A073450288	A133830112	A153430018
A073450198	A073450226	A073450257	A073450289	A133830114	A153430019
A073450199	A073450228	A073450258	A073450291	A133830115	A153430020
A073450200	A073450229	A073450259	A073450292	A133830116	A153430021
A073450201	A073450230	A073450260	A073450293	A133830117	A153430022
A073450202	A073450231	A073450261	A073450294	A133830118	A153430024
A073450204	A073450233	A073450263	A073450295	A133830119	A153430026
A073450205	A073450234	A073450265	A133800315	A133830120	A153430027
A073450206	A073450235	A073450266	A133800316	A133830121	A153430028
A073450207	A073450236	A073450267	A133800317	A133830122	

## ANADARKO AREA RESOLVED CLAIMS:

B048610208	B048640210	B068020020	B068020278	B068080271	B068080272
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## BILLINGS AREA RESOLVED CLAIMS:

C512010028	C512010037	C512010045	C512010061	C512010078	C512010084
C512010029	C512010038	C512010049	C512010067	C512010080	C512010086
C512010034	C512010040	C512010054	C512010068	C512010081	C512010091
C512010035	C512010041				

## JUNEAU AREA RESOLVED CLAIMS:

E000000019	E000000021	E000000026	E000000044	E000000047	E000000062
E000000020	E000000025	E000000042	E000000045	E000000048	

## MINNEAPOLIS AREA RESOLVED CLAIMS:

F554320060	F554320064	F554390097	F554390107	F554390108	F554390109
F554320063					

## MUSKOGEE AREA RESOLVED CLAIMS:

G039060022	G069300018	G069300029	G069300040	G079080125	G089050416
G039060032	G069300019	G069300030	G069300041	G079080321	G089050417
G049200004	G069300020	G069300031	G069300042	G079080322	G089050419
G049230005	G069300021	G069300032	G069300043	G089050124	G099070001
G069300001	G069300022	G069300033	G069300046	G089050145	G099070008
G069300002	G069300023	G069300034	G079080004	G089050149	G099070010
G069300004	G069300024	G069300035	G079080005	G089050387	G099070016
G069300012	G069300025	G069300036	G079080044	G089050394	G099070020
G069300015	G069300026	G069300037	G079080053	G089050404	G099070033
G069300016	G069300027	G069300038	G079080085	G089050406	G099070127
G069300017	G069300028	G069300039	G079080124	G089050412	G099070130



## MUSKOGEE AREA RESOLVED CLAIMS (CONTINUED):

G099070141	G099070150	G099070150A	G099070166	G109090013	G099070135
					G109090025

## ALBUQUERQUE AREA RESOLVED CLAIMS:

M207030003	M207060015	M207110108	M207170022	M257090038	M257140391
M207030005	M207070013	M207110111	M207170032	M257090039	M257140392
M207030011	M207070015	M207120001	M207170035	M257090040	M257140393
M207030016	M207070032	M207120004	M207170036	M257090046	M257160002
M207030019	M207110001	M207120006	M207170037	M257100007	M257160004
M207030023	M207110006	M207120011	M207170038	M257100145	M257160005
M207040004	M207110007	M207120012	M207170040	M257100146	M257160006
M207040005	M207110014	M207120018	M207170049	M257100147	M257160010
M207040012	M207110030	M207120020	M207170052	M257100148	M257160012
M207040014	M207110032	M207120021	M207170054	M257130067	M257160013
M207040026	M207110034	M207150005	M207170055	M257130068	M257160016
M207040041	M207110035	M207150010	M207170056	M257130070	M257160017
M207050015	M207110036	M207150015	M207170057	M257130135	M257160094
M207050018	M207110037	M207150023	M207200007	M257130142	M257160098
M207050019	M207110038	M207150024	M257080001	M257130143	M257160102
M207050030	M207110039	M207150025	M257080020	M257130144	M257160103
M207050034	M207110040	M207150026	M257080032	M257140072	M257180001
M207060008	M207110047	M207150048	M257080034	M257140073	M257180004
M207060010	M207110060	M207150054	M257080035	M257140074	M257180005
	M207110077	M207150055	M257080036	M257140075	M257180006
	M207110085	M207150057	M257090001	M257140077	M257180009
	M207110087	M207150058	M257090002	M257140079	M257180154
	M207110095	M207170010	M257090003	M257140080	M257180242
	M207110098	M207170011	M257090004	M257140388	M257180262
	M207110102	M207170012	M257090019	M257140389	M257190005
	M207110106	M207170019	M257090023	M257140390	M257190008

## PORTLAND AREA RESOLVED CLAIMS:

P041800004	P101100006	P132030031	P132030058	P132030088	P132030157
P041800038	P101110001	P132030032	P132030059	P132030089	P132030158
P041800039	P101110001A	P132030033	P132030061	P132030090	P132030166
P051810050	P101110021	P132030034	P132030062	P132030091	P132030419
P051810100	P101140009	P132030036	P132030063	P132030093	P132030420
P051810102	P101190006	P132030037	P132030064	P132030094	P132030421
P051820031	P101220005	P132030038	P132030065	P132030095	P132030422
P051820043	P111240024	P132030039	P132030066	P132030096	P132030423
P051820045	P111240026	P132030040	P132030067	P132030097	P132030424
P051820103	P111240040	P132030041	P132030068	P132030098	P132030425
P051830004	P111240046	P132030042	P132030069	P132030099	P132030426
P061170016	P132030008	P132030044	P132030070	P132030100	P132030427
P061170020	P132030010	P132030045	P132030071	P132030101	P132030428
P061180003	P132030020	P132030046	P132030073	P132030104	P132030430
P061250004	P132030021	P132030047	P132030074	P132030105	P132030431
P061250004A	P132030022	P132030048	P132030075	P132030106	P132030432
P071430030	P132030024	P132030049	P132030076	P132030107	P132030433
P091470002	P132030025	P132030050	P132030080	P132030109	P132030435
P091470003	P132030026	P132030051	P132030082	P132030117	P132030436
P101090003	P132030027	P132030052	P132030083	P132030119	P132030439
P101090012	P132030029	P132030053	P132030085	P132030149	P132031463
P101090016	P132030030	P132030056	P132030086		

[FR Doc. 89-29483 Filed 12-19-89; 8:45 am]

BILLING CODE 4310-02-C



**Bureau of Land Management**

[AA-610-00-4112-02]

**Information Collection Submitted to the Office of Management and Budget for Review Under the Paperwork Reduction Act**

The proposal for the collection of information listed below has been submitted to the Office of Management and Budget for approval under the provisions of the Paperwork Reduction Act (44 U.S.C. chapter 35). Copies of the proposed collection of information and related forms and explanatory material may be obtained by contacting the Bureau's Clearance Office at the phone number listed below. Comments and suggestions on the requirement should be made directly to the Bureau Clearance Officer and to the Office of Management and Budget Paperwork Reduction Project (1004-0134), Washington, DC 20503, telephone 202-395-7340.

*Title:* 43 CFR 3160—Onshore Oil and Gas Operations, Non-form Items.

*OMB Approval Number:* (1004-0134).

*Abstract:* Federal and Indian (except Osage) oil and gas operators and operating rights owners are required to retain and/or provide data so that proposed operations may be approved or compliance with granted approvals may be monitored.

*Bureau Form Numbers:* None.

*Frequency:* Nonrecurring.

*Description of Respondents:*

Operators and operating rights owners of Federal and Indian (except Osage) oil and gas leases.

*Estimate Completion Time:* 0.5 hour.

*Annual Responses:* 191,955.

*Annual Burden Hours:* 92,790

(Approx.).

*Bureau Clearance Officer:* (Alternate) Richard Iovaine, 202-653-8853.

Dated: November 21, 1989.

Hillary A. Oden,

Assistant Director, Energy and Mineral Resources.

[FR Doc. 89-29559 Filed 12-19-89; 8:45 am]

BILLING CODE 4310-84-M

**INTERNATIONAL TRADE COMMISSION**

[Inv. No. 337-TA-304]

**Certain Pressure Transmitters; Commission Decision Not To Review an Initial Determination Amending the Complaint**

**AGENCY:** U.S. International Trade Commission.

**ACTION:** Notice.

**SUMMARY:** Notice is hereby given that the U.S. International Trade Commission has determined not to review an initial determination (ID) Order No. 1) issued by the presiding administrative law judge (ALJ) amending the complaint in the above-captioned investigation to add a revised exhibit to correct an inadvertent error in the original exhibit.

**ADDRESSES:** Copies of the ID and all other nonconfidential documents filed in connection with this investigation are available for public inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E. Street, SW., Washington, DC 20436, telephone 202-252-1000.

**FOR FURTHER INFORMATION CONTACT:** Jean Jackson, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E. Street, SW., Washington, DC 20436, telephone 202-252-1104.

Hearing-impaired individuals are advised that information about this matter can be obtained by contacting the Commission's TDD terminal, 202-252-1810

**SUPPLEMENTARY INFORMATION:** This investigation was instituted on October 20, 1989, in response to a complaint filed by Rosemount, Inc. The complaint alleged that respondents SMAR Equipment and SMAR International Corp. were importing and selling pressure transmitters that were made by means of a process that infringed U.S. Letters Patent 3,800,413, owned by Rosemount. On November 10, 1989, the presiding ALJ issued an ID granting the motion of complainant Rosemount Inc. to amend the complaint to add Exhibit I(a) to correct an inadvertent mathematical error that appeared in original Exhibit I.

This action is taken under the authority of section 337 of the Tariff Act of 1930 (19 U.S.C. 1337) and § 210.53 of the Commission's Interim Rules of Practice and Procedure (53 FR 33070, Aug. 29, 1988).

By order of the Commission.

Issued: December 12, 1989.

Kenneth R. Mason,

Secretary.

[FR Doc. 89-29584 Filed 12-19-89; 8:45 am]

BILLING CODE 7020-02-M

**Service Sector Profiles and Barriers to Trade in Services: Supplemental Report on the Telecommunications And Information Processing Services Sector**

**AGENCY:** United States International Trade Commission.

**ACTION:** Supplemental report; request for written comments.

**EFFECTIVE DATE:** December 14, 1989.

**FOR FURTHER INFORMATION CONTACT:** Ms. Susan Kollins (202-252-1441), Office of Industries, U.S. International Trade Commission, Washington, DC 20436.

Background and scope of investigation: On November 27, 1989, the Commission received a request from the United States Trade Representative (USTR) for a supplemental report in connection with the above investigation. The USTR asked that the Commission analyze in the supplemental report certain foreign restrictive measures that USTR has identified involving telecommunications and information processing services. These restrictive measures were not addressed in the report transmitted in September 1989.

As requested by USTR, the Commission will follow the same format in the supplemental report that it followed in phase III of the report submitted in September. The Commission will provide a summary profile of the telecommunications and information processing services sector in selected foreign countries and an assessment of the effect on U.S. service industries of the removal of foreign measures which impede U.S. participation in the respective foreign service markets. The Commission will examine restrictive measures in foreign markets identified through an interagency process coordinated by USTR. As requested, the Commission will submit its report not later than May 28, 1990.

The original report was entitled "Service Sector Profiles and Barriers to Trade in Services." The investigation was instituted on August 10, 1988, following receipt of a letter from the USTR. The original report was submitted in three phases—a summary profile of 11 domestic service sectors was submitted in December 1988, a report on U.S. measures which may impede foreign participation in the U.S. services market was submitted to USTR in March 1989, and a report on selected foreign industry profiles and foreign nontariff measures was submitted in September 1989. Notice of the institution of the investigation was published in the Federal Register of August 17, 1988 [53



FR 31111). The Commission's reports in connection with this investigation have been classified by USTR.

Written submissions: No public hearing has been scheduled in this matter. However, interested persons are invited to submit written statements concerning the investigation. Commercial or financial information which a submitting party desires the Commission to treat as confidential must be submitted on separate sheets of paper, each clearly marked "Confidential Business Information" at the top. All submissions requesting confidential treatment must conform with the requirements of § 201.6 of the Commission's Rule of Practice and Procedure (19 CFR 201.6). All written submissions, except for confidential business information, will be available for inspection by interested persons. To be assured of consideration by the Commission, written statements should be submitted at the earliest possible date, but no later than March 1, 1990. All submissions should be addressed to the Secretary, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearing-impaired individuals are advised that information on this matter can be obtained by contacting our TDD terminal at (202) 252-1810.

By order of the Commission.

Issued: December 14, 1989.

Kenneth R. Mason,  
Secretary.

[FR Doc. 89-29583 Filed 12-19-89; 8:45 am]

BILLING CODE 7020-02-M

## INTERSTATE COMMERCE COMMISSION

[Ex Parte No. MC-177 (Sub-No. 1)]

### Petition To Institute Rulemaking on Negotiated Motor Common Carrier Rates

AGENCY: Interstate Commerce  
Commission.

ACTION: Notice.

**SUMMARY:** The Commission announces that, because of personnel and budgetary restraints, it is unable to participate in most private civil actions for undercharges related to Ex Parte No. MC-177, in which the shipper-defendant raises the claim that the carrier engaged in unreasonable practices.

**DATE:** This notice is effective on  
December 20, 1989.

**FOR FURTHER INFORMATION CONTACT:**  
Robert S. Burk, (202) 275-7312, [TDD for

hearing impaired: (202) 275-1721].

**SUPPLEMENTARY INFORMATION:** In Ex Parte No. MC-177, National Industrial Transportation League—Petition to Institute Rulemaking on Negotiated Motor Common Carrier Rates, 3 I.C.C.2d 99, 51 FR 39595 (Oct. 29, 1986) ("Negotiated Rates I"), and 5 I.C.C.2d 623, 54 FR 27768 (June 30, 1989) ("Negotiated Rates II"), we explained that it may be an unreasonable practice, in violation of 49 U.S.C. 10701, for a motor common carrier to solicit, bill, and accept payment in full for, traffic based upon a rate that it fails properly to file in an appropriate traffic at the ICC, and then later seek retroactive payments of additional amounts to reflect the higher rate that should have been charged under the applicable tariff on file with the ICC.

We stated that we would make individual determinations, in each case brought to us (with or without a court referral in appropriate circumstances), whether a carrier has in fact engaged in an unreasonable practice of this sort. We further explained that an unreasonable practice determination is within our primary jurisdiction, should be deferred to by the courts (unless our finding in a particular case is arbitrary, capricious, or not supported by the evidence), and should preclude the carrier (or its successor in interest) from collecting the higher tariff rate in an undercharge action brought under 49 U.S.C. 10761.

The courts are currently divided on this matter. *Compare Maislin Industries U.S., Inc. v. Primary Steel, Inc.*, 879 F.2d 400 (8th Cir. 1989), petition of cert. pending, No. 89-624 (filed Oct. 16, 1989) (upholding referral to ICC and subsequent application of the ICC's unreasonable practice claim) and *INF, Ltd. v. Spectro Alloys Corp.*, 881 F.2d 546 (8th Cir. 1989) (reversing lower court's enforcement of tariff rate in the face of an unreasonable practice finding by the ICC) with *Matter of Carvavan Refrigerated Cargo, Inc.*, 864 F.2d 388 (5th Cir. 1989), petition for cert. pending, No. 88-1958 (filed May 30, 1989) (upholding denial of referral request and enforcement of filed rate despite shipper's unreasonable practice allegation). In view of this confusion and the large number of cases involved, the Supreme Court may very well decide to resolve the issue.

In the meantime, we have received numerous requests from shippers for the Commission to participate directly in private civil actions to represent our interests in this area. The Commission

has participated in some, but not all, of the cases in which we have received requests. However, we simply do not have sufficient staff and budget resources to participate in all of the private civil actions in which our presence is requested by a party. The small staff of attorneys in our General Counsel's Office would be unable to fulfill its normal functions of advising the Commission and defending Commission decisions on direct judicial review pursuant to 28 U.S.C. 2321 if they were to participate in all such actions in which the Commission has been asked by a party to participate.

Our participation in individual court actions should not be necessary, since our policy and position on the legal issue is a matter of public record, in Negotiated Rates I and II. Courts should refer any reasonable practice claim to us. We can and will exercise our primary jurisdiction to decide those claims when they are brought to us, whether or not by court referral. Moreover, courts can and should apply our reasonable practice findings in individual cases, by dismissing the undercharge action based on our findings.

In the meantime, while we may choose to appear in some cases to address either a new issue or a circuit that has not yet considered our Negotiated Rates I and II policy, we will generally decline to participate in some court cases on this subject. Parties involved in such litigation may choose to file this general notice of Commission position in their individual cases in which the Commission does not elect to appear or otherwise participate.

Decided: December 11, 1989.

By the Commission, Chairman Gradison,  
Vice Chairman Simmons, Commissioners  
Lambole, Phillips, and Emmett.

Noreta R. McGee,  
Secretary.

[FR Doc. 89-29446 Filed 12-19-89; 8:45 am]

BILLING CODE 7035-01-M

## JOINT BOARD FOR THE ENROLLMENT OF ACTUARIES

### Advisory Committee on Actuarial Examinations; Meeting

Notice is hereby given that the Advisory Committee on Actuarial Examinations will meet in Room 3001, Ariel Rios Federal Building, located on 12th Street, NW., between Constitution and Pennsylvania Avenues in Washington, DC on January 16 and 17,



1990, from 8:30 a.m. to 5:00 p.m. each day.

The purpose of the meeting is to discuss topics and questions which may be recommended for inclusion on future Joint Board examinations in actuarial mathematics and methodology referred to in Title 29 U.S. Code, section 1242(a)(1)(B) and to review the November 1989 Joint Board examinations in order to make recommendations relative thereto, including the minimum acceptable pass score.

A determination as required by section 10(d) of the Federal Advisory Committee Act (Pub. L. 92-463) has been made that the subject of the meeting falls within the exceptions to the open meeting requirement set forth in title 5 U.S. Code, section 552b(c)(9)(B), and that the public interest requires that such meeting be closed to public participation.

Dated: December 15, 1989.

Leslie S. Shapiro,

Advisory Committee Management Officer,  
Joint Board for the Enrollment of Actuaries.  
[FR Doc. 89-29591 Filed 12-19-89; 8:45 am]

BILLING CODE 4810-25-M

## NATIONAL SCIENCE FOUNDATION

### Permits Issued Under the Antarctic Conservation Act of 1978

**AGENCY:** National Science Foundation.

**ACTION:** Notice of permits issued under the Antarctic Conservation Act of 1978, Public Law 95-541.

**SUMMARY:** The National Science Foundation (NSF) is required to publish notice of permits issued under the Antarctic Conservation Act of 1978. This is the required notice of permits issued.

**FOR FURTHER INFORMATION CONTACT:** Charles E. Myers, Permit Office, Division of Polar Programs, National Science Foundation, Washington, DC 20550.

**SUPPLEMENTARY INFORMATION:** On October 27, 1989 and November 8, 1989, the National Science Foundation published notices in the *Federal Register* of permit applications received. Permits were issued to the following individuals on December 12, 1989: Stephen L. Burns; William R. Fraser.

Charles E. Myers,

Permit Office, Division of Polar Programs.  
[FR Doc. 89-29492 Filed 12-19-89; 8:45 am]

BILLING CODE 7555-01-M

## SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-27518; [File No. SR-DTC-89-01]

### Self-Regulatory Organizations; Depository Trust Company; Order Granting Accelerated Approval of a Proposed Rule Change Concerning the Rush Withdrawal Transfer Service

December 7, 1989.

On July 21, 1989, pursuant to section 19(b)(2) of the Securities Exchange Act of 1934,<sup>1</sup> the Securities and Exchange Commission ("Commission") approved, on a temporary basis, a proposed rule change filed by the Depository Trust Company.<sup>2</sup> The temporary approval order authorized DTC to institute, on a pilot basis, a new Rush Withdrawal Transfer ("RWT") service for corporate issues settling in next-day funds that are not full Fast Automated Securities Transfer ("FAST") issues.<sup>3</sup> By letter dated November 21, 1989, DTC requested an extension of the pilot program on an accelerated basis.<sup>4</sup> This order extends the pilot program until March 31, 1990.

The Commission finds good cause for accelerated approval. The terms and substance of DTC's proposal have been noticed in the *Federal Register*,<sup>5</sup> and the Commission has solicited, but not received, comments concerning the proposal. Accelerated approval will allow DTC to gain operational experience on an uninterrupted basis and allow the Commission to continue its review of the proposal.

The Commission further finds that the proposed rule change is consistent with the requirements of section 17A of the Act as it is designed to facilitate the prompt and accurate clearance and settlement of securities transactions by allowing transfer agents to process ownership transfers on an expedited basis.<sup>6</sup>

It is therefore ordered, pursuant to section 19(b)(2) of the Act, that the proposed rule change (SR-DTC-89-01)

<sup>1</sup> 15 U.S.C. section 78s(b)(1).

<sup>2</sup> See Securities Exchange Act Release No. 27052 (July 21, 1989), 54 FR 31600.

<sup>3</sup> *Id.* at n. 2.

<sup>4</sup> See letter from Patricia Trainor, Associate Counsel, DTC, to Jonathan Kallman, Assistant Director, Division of Market Regulation, dated November 21, 1989.

<sup>5</sup> See Securities Exchange Act Release No. 26730 (April 14, 1989), 54 FR 16438.

<sup>6</sup> See Securities Exchange Act Release No. 27052 (July 21, 1989), 54 FR 31600.

be, and is hereby, approved on an accelerated basis until March 31, 1990.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.

Jonathan G. Katz,

Secretary.

[FR Doc. 89-29564 Filed 12-19-89; 8:45 am]

BILLING CODE 8010-01-M

[34-27531; [SR-MBS-89-6]]

### Self-Regulatory Organizations; MBS Clearing Corporation; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Amending Broker Give-Up Trade Procedures

December 11, 1989.

Pursuant to section 19(b)(1) of the Securities Exchange Act of 1934 ("Act"), 15 U.S.C. 78s(b)(1), notice is hereby given that on November 16, 1989, the MBS Clearing Corporation ("MBSCC") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I, II and III below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

#### I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

A copy of the proposed procedures of MBSCC regarding its Broker Give-Up Program are contained in the proposal that is on file with, and available from, the Commission. The proposed procedures assume that the rules and procedures contained in SR-MBS-89-3 (submitted March 29, 1989) have been approved by the Commission.

#### II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in sections (A), (B) and (C) below, of the most significant aspects of such statements.



**(A) Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change**

The purpose of the proposed rule change is to revise MBSCC's Procedures regarding Broker "Give-Up Trades." The term Broker Give-Up Trade means an SBO-Destined Trade or Trade for Trade transaction reported by a Broker on behalf of selling and purchasing Dealers (Article I, Rule 1). Pursuant to MBSCC Article II, Rule 2, after the Broker input, the Broker is deleted and the Dealers are substituted as the original Contra-Side Participants after a period (i) prescribed by MBSCC Procedures, or (ii) elected by the Broker ("Broker Give-Up Cycle"). The rules make clear that any Broker submitting a Broker Give-Up Trade represents that it is authorized to do so by the Dealers for which it is acting and the Dealers agree that at all times they shall remain liable as principals.

The proposed revisions to the Procedures allow a Broker to advise MBSCC when or whether to "Give-Up" or disclose the identities of the Contra-Side Dealer to the respective purchasing and selling Dealers. (Dealers employ Brokers to act on their behalf in order to temporarily preserve their anonymity, which is perceived as a competitive advantage.) However, the Procedures make clear that the Dealers must agree on all terms of the transactions including the length of the Give-Up Cycle. (MBSCC rules require Dealers in a Give-Up Trade to notify the Broker of any discrepancies in the Purchase and Sales Reports; Brokers receiving such notification must resolve these discrepancies and submit corrections to MBSCC. Article II, Rule 3, section 5.) MBSCC and the Broker will always know the identity of the Dealers. Currently, under MBSCC Procedures, a Broker must "Give-Up" or disclose the identity of the Dealers within 5 (business) days of Trade Date. Brokers seeking to preserve desired Dealer anonymity for a longer period enter trades on a "Non Give-Up" basis, with the Broker acting as the Original Contra-Side Participant to both Dealers. (The Procedures have no provisions for a Give-Up period of less than 5 days.) The proposed procedural changes now provide that Brokers are no longer restricted by the prior 5-day Give-Up period and may enter trades for Give-Up (disclose Dealer identity) at any time within 9 days of Trade Date or not to Give-Up (never disclose Dealer identity), depending on the Dealer's preferences. The result is the same under current rules and Procedures

(Dealers are subject to the same rights and obligations; Dealers act as principals and are ultimately liable), but now the Dealers have increased flexibility in retaining anonymity. In addition, by allowing the increased flexibility regarding Dealer anonymity, and removing any artificial incentives for Brokers to delay entering trades, MBSCC will be able to more promptly record these trades and offer the related benefits of margin protection on behalf of both the purchasing and selling Dealers. Brokers will no longer have to delay submitting trade input (because of the prior T+5 automatic Give-Up) to preserve or extend requested Dealer anonymity.

The proposed rule changes are consistent with section 17A of the Act in that they facilitate the prompt and accurate clearance and settlement of securities transactions.

**B. Self-Regulatory Organization's Statement on Burden on Competition**

MBSCC does not believe that any burden will be placed on competition as a result of the proposed rule changes.

**(C) Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants or Others**

MBSCC has discussed the proposed Procedures regarding the Program with various Participants. Representatives of MBSCC's Broker Advisory Committee requested that the Procedures incorporate a mechanism for the processing of Broker Error Trades, for the processing of Broker Error Trades, specifically those where there is a discrepancy in price. As a result of the Committee's concerns, a provision has been added to the Procedures which specifically provide for the processing of such Broker Error Trades.

**III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action**

The foregoing rule change has become effective pursuant to section 19(b)(3) of the Act and subparagraph (e) of Rule 19b-4 thereunder. At any time within 60 days of the filing of such proposed rule change, the Commission may summarily abrogate such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

**IV. Solicitation of Comments**

Interested persons are invited to submit written data, views and arguments concerning the foregoing.

Persons making written submissions should file six copies thereof with the Secretary, Securities and Exchange Commission, 450 Fifth Street, NW., Washington, DC 20549. Copies of the submission, all subsequent amendments, all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying in the Commission's Public Reference section, 450 Fifth Street, NW. Washington, DC. Copies of such filing will also be available for inspection and copying at the principal office of the above-referenced self-regulatory organization. All submissions should refer to File No. SR-MBS-89-6 and should be submitted by January 10, 1990.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.

Jonathan G. Katz,

Secretary.

[FR Doc. 89-29505 Filed 12-19-89; 8:45 am]

BILLING CODE 8010-01-M

**DEPARTMENT OF TRANSPORTATION**

**Office of the Secretary**

**Fitness Determination of YV Services, Inc.**

**AGENCY:** Department of Transportation.

**ACTION:** Notice of commuter air carrier fitness determination—order 89-12-24, order to show cause.

**SUMMARY:** The Department of Transportation is proposing to find YV Services, Inc. d/b/a Skyway Airlines fit, willing, and able to provide commuter air service under section 419(e) of the Federal Aviation Act.

**RESPONSES:** All interested persons wishing to respond to the Department of Transportation's tentative fitness determination should file their responses by December 29, 1989 with the Air Carrier Fitness Division, P-56, Department of Transportation, 400 Seventh Street, SW., Room 6420, Washington, DC 20590, and serve them on all persons listed in Attachment A to the order.

**FOR FURTHER INFORMATION CONTACT:** Ms. Delores King, Air Carrier Fitness Division (P-56, Room 6401), U.S. Department of Transportation, 400



Seventh Street, SW., Washington, DC 20590, (202) 366-2343.

Jeffrey N. Shans,

Assistant Secretary for Policy and International Affairs.

[FR Doc. 89-29590 Filed 12-19-89; 8:45 am]

BILLING CODE 4910-62-M

## Federal Aviation Administration

[Summary Notice No. PE-89-46]

### Petition for Exemption; Summary of Petitions Received; Dispositions of Petitions Issued

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of petitions for exemption received and of dispositions of prior petitions.

**SUMMARY:** Pursuant to FAA's rulemaking provisions governing the application, processing, and disposition of petitions for exemption (14 CFR part 11), this notice contains a summary of certain petitions seeking relief from specified requirements of the Federal Aviation Regulations (14 CFR chapter I), dispositions of certain petitions previously received, and corrections. The purpose of this notice is to improve the public's awareness of, and participation in, this aspect of FAA's regulatory activities. Neither publication of this notice nor the inclusion or omission of information in the summary is intended to affect the legal status of any petition or its final disposition.

**DATE:** Comments on petitions received must identify the petition docket number involved and must be received on or before: January 9, 1990.

**ADDRESS:** Send comments on any petition in triplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-10), Petition Docket No. \_\_\_\_\_, 800 Independence Avenue, SW., Washington, DC 20591.

**FOR FURTHER INFORMATION CONTACT:** The petition, any comments received, and a copy of any final disposition are filed in the assigned regulatory docket and are available for examination in the Rules Docket (AGC-10), Room 915G, FAA Headquarters Building (FOB 10A), 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267-3132.

This notice is published pursuant to paragraphs (c), (e), and (g) of § 11.27 of part 11 of the Federal Aviation Regulations (14 CFR part 11).

Issued in Washington, DC, on December 12, 1989.

Denise Donohue Hall,

Manager, Program Management Staff, Office of the Chief Counsel.

Docket No.: 25960.

Petitioner: James M. Logsdon.

Sections of the FAR Affected: 14 CFR 91.24.

**Description of Relief Sought:** To allow petitioner to fly within 30 nautical miles of a terminal control area primary airport without a Mode C transponder.

Docket No.: 26030.

Petitioner:

National Business Aircraft

Association.

Regulations Affected: 14 CFR 91.35(c) and (d)(2).

**Description of Relief Sought:** To allow petitioner's members to operate under the provision of § 91.35(a) when cockpit voice recorder and/or flight recorder is temporarily removed for inspection, repair, modification, or replacement to specified conditions.

Docket No.: 26046.

Petitioner: Special Products Aviation, Inc.

Sections of the FAR Affected: 14 CFR 45.29.

**Description of Relief Sought:** To allow petitioner to complete restoration of its 1965 C-150 E N150TD airplane with 4-inch registration markings instead of the required 12-inch markings.

Docket No.: 26049.

Petitioner: National Agricultural Aviation Association.

Sections of the FAR Affected: 14 CFR 135.1(c) and 135.251.

**Description of Relief Sought:** To allow petitioner relief from the requirements for an antidrug program.

Docket No.: 062CE.

Petitioner: Caproni Vizzola.

Sections of the FAR Affected: 14 CFR 23.677(b)(2).

**Description of Relief Sought:** To allow exemption from rudder trim tab stability requirements.

Docket No.: 05010.

Petitioner: The Aviation Standards National Field Office, Federal Aviation Administration.

Regulations Affected: 14 CFR 91.79 (b) and (c), 91.109, 91.116 (a) and (b), and 91.121(b).

**Description of Relief Sought/Disposition:** To allow Exemption No. 318A that allows petitioner to conduct flight inspections of air navigation facilities and instrument approach procedures. The amendment would reflect organizational changes within the FAA.

GRANT, December 5, 1989, Exemption No. 5118

Docket No.: 25030.

Petitioner: Pan Am Express, Inc.

Regulations Affected: 14 CFR 93.123 and 93.129.

**Description of Relief Sought/Disposition:** To extend Exemption No. 4777B that authorizes petitioner to conduct ten operations during four of the five high density hours at the John F. Kennedy International Airport using portions of runways and aircraft capable of conducting short takeoff and landing operations.

GRANT, November 9, 1989, Exemption No. 4777C

Docket No.: 25336.

Petitioner: United Airlines.

Regulations Affected: 14 CFR 121.697(a)(3) and 121.709(b)(3).

**Description of Relief Sought/Disposition:** To allow petitioner to use a computer-printed name of a qualified person in lieu of their physical signature on the maintenance release portion of the aircraft flight log book.

GRANT, December 5, 1989, Exemption No. 5121

Docket No.: 25390.

Petitioner: Airbus Industrie.

Sections of the FAR Affected: 14 CFR 43.3(a), 145.35, 145.71, and 145.73(a).

**Description of Relief Sought/Disposition:** To allow petitioner to be certificated as a U.S. foreign repair station to perform maintenance, preventive maintenance, repair, and alteration of the aircraft it manufactures and components thereof, for those aircraft under U.S. registration without limitation as to where such aircraft operate.

GRANT, December 5, 1989, Exemption No. 5120

Docket No.: 25886.

Petitioner: Washoe County (NV) Sheriff's Office.

Sections of the FAR Affected: 14 CFR 61.118.

**Description of Relief Sought/Disposition:** To allow members of petitioner's Air Squadron to be reimbursed for fuel and oil costs while performing official search and rescue missions.

PARTIAL GRANT, December 5, 1989, Exemption No. 5119

[FR Doc. 89-29550 Filed 12-19-89; 8:45 am]

BILLING CODE 4910-13-M



**Radio Technical Commission for Aeronautics (RTCA); Special Committee 174—Minimum Operational Performance Standards for Traffic Alert and Collision Avoidance Systems Airborne Equipment; Notice of Meeting**

Pursuant to section 10(a)(2) of the Federal Advisory Committee Act (Public Law 92-463; 5 U.S.C. App. I), notice is hereby given for the thirty-first meeting of RTCA Special Committee 174 on Minimum Operational Performance Standards for Traffic Alert and Collision Avoidance Systems Airborne Equipment to be held January 17-19, 1990, in the RTCA Conference Room, One McPherson Square, 1425 K Street, NW., Suite 500, Washington, DC 20005, commencing at 9 a.m.

The agenda for this meeting is as follows: (1) Chairman's introductory remarks; (2) review of meeting agenda; (3) approval of minutes of the thirtieth meeting, RTCA Paper No. XXX-89/SC147-XXX; (4) TCAS Program status reports on legislative and rulemaking update, FAA TCAS Program, and TCAS Transition Program; (5) report of Pilot Working Group Activities; (6) discussion of issues identified by Boeing, RTCA Paper No. 340-89/SC147-373 on CAS logic shortcomings and independent "end-to-end" MOPS review; (7) consideration of proposed change to RTCA/DO-197 (TCAS II), RTCA Paper No. XXX-89/SC147-XXX; (8) review of Mode S issues; (9) review of SC-147 work plan and schedule including proposed change 7; (10) other business; and (11) date and place of next meeting.

Attendance is open to the interested public but limited to space available. With the approval of the Chairman, members of the public may present oral statements at the meeting. Persons wishing to present statements or obtain information should contact the RTCA Secretariat, One McPherson Square, 1425 K Street, NW., Suite 500, Washington, DC 20005; (202) 682-0266. Any member of the public may present a written statement to the committee at any time.

Issued in Washington, DC on December 13, 1989.

Geoffrey R. McIntyre,  
Designated Officer.

[FR Doc. 89-29549 Filed 12-19-89; 8:45 am]  
BILLING CODE 4910-13-M

**Radar Approach Control at Moses Lake, WA; Establishment**

Notice is hereby given that on or about January 11, 1990, an air traffic control terminal radar approach control facility will be established at Grant

County Airport, Moses Lake, Washington. Hours of operation will be 6:30 a.m. to 11 p.m. local time, 7 days per week. This information will be reflected in the FAA Organization Statement the next time it is issued. (Sec. 313(a), 72 Stat. 752; 49 U.S.C. 1354.)

Issued in Seattle, Washington, on December 1, 1989.

Lawrence B. Andriesen,  
Acting Regional Administrator, Northwest Mountain Region.

[FR Doc. 89-29544 Filed 12-19-89; 8:45 am]  
BILLING CODE 4910-13-M

**Radar, Approach Control at Pasco, WA; Establishment**

Notice is hereby given that on or about January 11, 1990, an air traffic control terminal radar approach control facility will be established at Tri-Cities Airport, Pasco, Washington. Hours of operation will be 5:30 a.m. to 10:30 p.m. local time, 7 days per week. This information will be reflected in the FAA Organization Statement the next time it is issued. (Sec. 313(a), 72 Stat. 752; 49 U.S.C. 1354.)

Issued in Seattle, Washington, on December 1, 1989.

Lawrence B. Andriesen,  
Acting Regional Administrator, Northwest Mountain Region.

[FR Doc. 89-29545 Filed 12-19-89; 8:45 am]  
BILLING CODE 4910-13-M

**Federal Highway Administration**

**Environmental Impact Statement; Cumberland County, NC**

**AGENCY:** Federal Highway Administration (FHWA), DOT.

**ACTION:** Notice of Intent.

**SUMMARY:** The FHWA is issuing this notice to advise the public that an environmental impact statement will be prepared for a proposed highway project in the City of Fayetteville, North Carolina.

**FOR FURTHER INFORMATION CONTACT:** Robert L. Lee, District Engineer, Federal Highway Administration, P.O. Box 26803, Raleigh, North Carolina 27611, Telephone (919) 790-2856.

**SUPPLEMENTARY INFORMATION:** The FHWA in cooperation with the North Carolina Department of Transportation (NCDOT) will prepare an environmental impact statement (EIS) for the extension of U.S. 13 between the I-95/U.S. 13 interchange and the All American Freeway, north of Fayetteville, North Carolina. The proposed action would be the construction of a multi-lane divided

highway, on a new location for a distance of about 14 miles. Improvements to the corridor are considered necessary to increase safety and traffic service from I-95 to and around the City of Fayetteville.

Alternatives under consideration include: (1) The "no-build", which includes: Transportation Systems Management Alternative; Mass Transit Alternative; and "do-nothing" alternative, and (2) build alternatives for a controlled access highway on new location.

Solicitation of comments on the proposed action are being sent to appropriate Federal, State and local agencies. A complete public involvement program has been developed for the project to include: the distribution of newsletters to interested parties, along with public meetings and a public hearing to be held in the study area. Information on the time and place of the public hearing will be provided in the local news media. The draft EIS will be available for public and agency review and comment prior to the public hearing. No formal scoping meeting is planned at this time.

To assure that the full range of issues related to this proposed action are addressed and all significant issues identified, comments and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the EIS should be directed to the FHWA at the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program).

Robert L. Lee,

District Engineer, Raleigh, North Carolina,  
[FR Doc. 89-29553 Filed 12-19-89; 8:45 am]

BILLING CODE 4910-22-M

**DEPARTMENT OF THE TREASURY**

**Public Information Collection Requirements Submitted to OMB for Review**

Date: December 14, 1989.

The Department of Treasury has submitted the following public information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1980, Public Law 96-511. Copies of the submission(s) may be obtained by calling the Treasury Bureau Clearance Officer listed. Comments regarding this



information collection should be addressed to the OMB reviewer listed and to the Treasury Department Clearance Officer, Department of the Treasury, Room 2224, 1500 Pennsylvania Avenue, NW., Washington, DC 20220.

#### Internal Revenue Service

OMB Number: 1545-0820.

Form Number: None.

Type of Review: Extension.

Title: Incentive Stock Options.

Description: The affected public includes corporations which transfer stock to any person after 1979 pursuant to such person's exercise of a statutory stock option. The corporation must furnish each person receiving such stock with a written statement describing the transfer. The statement will assist such persons in filing their tax returns.

Respondents: Businesses or other for-profit, Small businesses or organizations.

Estimated Number of Respondents: 1.

Estimated Burden Hours Per Response: 1 hour.

Frequency of Response: Annually.

Estimated Total Reporting Burden: 1 hour.

OMB Number: 1545-0985.

Form Number: None.

Type of Review: Extension.

Title: Generation-skipping Transfer Tax Regulations Under the Tax Reform Act of 1986.

Description: This regulation provides rules relating to the effective date, return requirements, definitions, and certain special rules covering the generation-skipping transfer tax.

Respondents: Individuals or households.

Estimated Number of Respondents: 7,500.

Estimated Burden Hours Per Response: 30 minutes.

Frequency of Response: Annually—Form 709; Form 706 is filed within 9 months after a taxpayer dies.

Estimated Total Reporting Burden: 3,750 hours.

Clearance Officer: Garrick Shear (202) 535-4297, Internal Revenue Service, Room 5571, 1111 Constitution Avenue, NW., Washington, DC 20224.

OMB Reviewer: Milo Sunderhauf, (202) 395-6880, Office of Management and Budget, Room 3001, New Executive Office Building, Washington, DC 20503.

Lois K. Holland,

Departmental Reports, Management Officer.  
[FR Doc. 89-29434 Filed 12-19-89; 8:45 am]

BILLING CODE 4810-25-M

#### Office of Thrift Supervision

##### Appointment of Conservator; Arlington Heights Savings Association, F.A. Arlington, Heights, Illinois

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2) (B) and (H) of the Home Owners' Loan Act of 1933, as amended by § 301 of the Financial Institutions Reform, Recovery and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Conservator for Arlington Heights Savings Association, F.A., Arlington Heights, Illinois ("Association") on December 7, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29507 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M

##### Brookside Federal Savings and Loan Association Los Angeles, CA; Appointment of Conservator

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2)(B) and (H) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Conservator for Brookside Federal Savings and Loan Association, Los Angeles, California ("Association") on November 30, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29508 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M

##### Community Federal Savings Association, Bridgeport, CT; Appointment of Conservator

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2)(B) and (H) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Conservator for Community Federal Savings Association, Bridgeport, Connecticut, ("Association") on December 7, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29509 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M

##### First Federal Savings Bank, Diamondville, WY; Appointment of Conservator

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2) (B) and (H) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Conservator for First Federal Savings Bank, Diamondville, Wyoming ("Savings Bank") on November 30, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29510 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M

##### Fortune Financial Federal Savings and Loan Association, Copperas Cove, TX; Appointment of Conservator

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2) (B) and (H) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Conservator for Fortune Financial Federal Savings and Loan Association, Copperas Cove, Texas ("Association") on November 30, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29511 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M

##### The Garnett Savings and Loan Association, Garnett, KS; Appointment of Conservator

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2)(B) and (H) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Conservator for The



Garnett Savings and Loan Association, Garnett, Kansas ("Association") on December 7, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29512 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M

**Appointment of Receiver; Arlington Heights Federal Savings and Loan Association Arlington Heights, IL**

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2)(A) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Receiver for Arlington Heights Federal Savings and Loan Association, Arlington Heights, Illinois ("Association") on December 7, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29513 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M

**Austin Federal Savings and Loan Association, Austin, TX; Appointment of Conservator**

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2)(B) and (H) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Conservator for Austin Federal Savings and Loan Association, Austin, Texas ("Association") on November 30, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29514 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M

**Austin Savings Association, Austin, TX; Appointment of Receiver**

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2)(C) of the Home Owners' Loan

Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Receiver for Austin Savings Association, Austin, Texas ("Association") on November 30, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29515 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M

**Brookside Savings and Loan Association, Los Angeles, CA; Appointment of Receiver**

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2)(C) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Receiver for Brookside Savings and Loan Association, Los Angeles, California ("Association") on November 30, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29516 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M

**Colonial Savings Bank, A Savings and Loan Association, Roselle Park, NJ; Appointment of Receiver**

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2)(C) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Receiver for Colonial Savings Bank, a Savings and Loan Association, Roselle Park, New Jersey ("Association") on November 9, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29517 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M

**Colonial Federal Savings Association, Roselle Park, NJ; Replacement of Conservator With a Receiver**

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2)(B) and (H) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly replaced the Resolution Trust Corporation as Conservator for Colonial Federal Savings Association, Roselle Park, New Jersey ("Association") with the Resolution Trust Corporation as sole Receiver for the Association on November 9, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29518 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M

**Community Federal Savings and Loan Association, Bridgeport, CT; Appointment of Receiver**

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2)(B) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Receiver for Community Federal Savings and Loan Association, Bridgeport, Connecticut ("Association") on December 7, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29519 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M

**First Louisiana Federal Savings Banks, Lafayette, LA; Appointment of Receiver**

Notice is hereby given that, pursuant to the authority contained in subdivision (F) of section 5(d)(2)(a) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Receiver for First Louisiana Federal Savings Bank, Lafayette, Louisiana ("Association") on November 2, 1989.

Dated: December 12, 1989.



By the Office of Thrift Supervision.  
**M. Danny Wall,**  
*Director.*  
[FR Doc. 89-29520 Filed 12-19-89; 8:45 am]  
BILLING CODE 6720-01-M

**First Louisiana Federal Savings Bank,  
F.A. Lafayette, LA; Replacement of  
Conservator With a Receiver**

Notice is hereby given that, pursuant to the authority contained in subdivision (F) of section 5(d)(2) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision duly replaced the Resolution Trust Corporation as Conservator for First Louisiana Federal Savings Bank, F.A. Lafayette, Louisiana ("Association") with the Resolution Trust Corporation as sole Receiver for the Association on November 2, 1989.

Dated: December 12, 1989.  
By the Office of Thrift Supervision.  
**M. Danny Wall,**  
*Director.*  
[FR Doc. 89-29521 Filed 12-19-89; 8:45 am]  
BILLING CODE 6720-01-M

**First Savings Bank, F.S.B.  
Diamondville, WY; Appointment of  
Receiver**

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2)(C) of the Home Owner's Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Receiver for First Savings Bank, F.S.B. Diamondville, Wyoming ("Savings Bank") on November 30, 1989.

Dated: December 12, 1989.  
By the Office of Thrift Supervision.  
**M. Danny Wall,**  
*Director.*  
[FR Doc. 89-29522 Filed 12-19-89; 8:45 am]  
BILLING CODE 6720-01-M

**Fortune Financial, a Savings and Loan  
Institution, Copperas Cove, TX;  
Appointment of Receiver**

Notice is hereby given that, pursuant to the authority contained in § 5(d)(2)(C) of the Home Owners' Loan Act of 1933, as amended by § 301 of the Financial Institutions Reform, Recovery and Enforcement Act of 1989, the Office of Thrift Supervision duly appointed the

Resolution Trust Corporation as sole Receiver for Fortune Financial, a Savings and Loan Institution, Copperas Cove, Texas ("Association") on November 30, 1989.

Dated: December 12, 1989.  
By the Office of Thrift Supervision.  
**M. Danny Wall,**  
*Director.*  
[FR Doc. 89-29523 Filed 12-19-89; 8:45 am]  
BILLING CODE 6720-01-M

**General Bank, a Federal Savings Bank,  
Miami, FL; Appointment of Receiver**

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2) (B) and (H) of the Home Owner's Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Receiver for General Bank, a Federal Savings Bank, Miami, Florida ("Savings Bank") on November 16, 1989.

Dated: December 12, 1989.  
By the Office of Thrift Supervision.  
**M. Danny Wall,**  
*Director.*  
[FR Doc. 89-29524 Filed 12-19-89; 8:45 am]  
BILLING CODE 6720-01-M

**General Federal Savings Bank, Miami,  
FL; Replacement of Conservator With  
a Receiver**

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2) (B) and (H) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision duly replaced the Resolution Trust Corporation as Conservator for General Federal Savings Bank, Miami, Florida ("Savings Bank") with the Resolution Trust Corporation as sole Receiver for the Association on November 16, 1989.

Dated: December 12, 1989.  
By the Office of Thrift Supervision.  
**M. Danny Wall,**  
*Director.*  
[FR Doc. 89-29525 Filed 12-19-89; 8:45 am]  
BILLING CODE 6720-01-M

**Independence Savings & Loan  
Association, Vallejo, CA; Appointment  
of Receiver**

Notice is hereby given that, pursuant to the authority contained in subdivision (F) of section 5(d)(2)(c) of the Home

Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Receiver for Independence Savings and Loan Association, Vallejo, California ("Association") on October 20, 1989.

Dated: December 12, 1989.  
By the Office of Thrift Supervision.  
**M. Danny Wall,**  
*Director.*  
[FR Doc. 89-29526 Filed 12-19-89; 8:45 am]  
BILLING CODE 6720-01-M

**Sooner Federal Savings & Loan  
Association, Tulsa, OK; Appointment  
of Receiver**

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2) (B) and (H) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Receiver for Sooner Federal Savings and Loan Association, Tulsa, Oklahoma ("Association") on November 16, 1989.

Dated: December 12, 1989.  
By the Office of Thrift Supervision.  
**M. Danny Wall,**  
*Director.*  
[FR Doc. 89-29527 Filed 12-19-89; 8:45 am]  
BILLING CODE 6720-01-M

**Sooner Federal Savings Association,  
Tulsa, OK; Replacement of  
Conservator With a Receiver**

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2) (B) and (H) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision duly replaced the Resolution Trust Corporation as Conservator for Sooner Federal Savings Association, Tulsa, Oklahoma ("Association") with the Resolution Trust Corporation as sole Receiver for the Association on November 16, 1989.

Dated: December 12, 1989.  
By the Office of Thrift Supervision.  
**M. Danny Wall,**  
*Director.*  
[FR Doc. 89-29528 Filed 12-19-89; 8:45 am]  
BILLING CODE 6720-01-M



**Texas Western Federal Savings  
Association, Houston, TX;  
Appointment of Receiver**

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2) (B) and (H) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly appointed the Resolution Trust Corporation as sole Receiver for Sooner Federal Savings Association, Tulsa, Oklahoma ("Association") on November 16, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29529 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M

**Texas Western Federal Savings &  
Loan Association, Houston, TX;  
Replacement of Conservator With a  
Receiver**

Notice is hereby given that, pursuant to the authority contained in section 5(d)(2)(B) and (H) of the Home Owners' Loan Act of 1933, as amended by section 301 of the Financial Institutions Reform,

Recovery, and Enforcement Act of 1989, the Office of Thrift Supervision has duly replaced the Resolution Trust Corporation as Conservator for Texas Western Federal Savings and Loan Association, Houston, Texas ("Association") with the Resolution Trust Corporation as sole Receiver for the Association on November 16, 1989.

Dated: December 12, 1989.

By the Office of Thrift Supervision.

M. Danny Wall,

Director.

[FR Doc. 89-29530 Filed 12-19-89; 8:45 am]

BILLING CODE 6720-01-M



# Sunshine Act Meetings

Federal Register

Vol. 54, No. 243

Wednesday, December 20, 1989

This section of the FEDERAL REGISTER contains notices of meetings published under the "Government in the Sunshine Act" (Pub. L. 94-409) 5 U.S.C. 552b(e)(3).

## FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION

December 12, 1989.

**TIME AND DATE:** 10:00 a.m., Thursday, December 21, 1989.

**PLACE:** Room 600, 1730 K Street NW., Washington, DC.

**STATUS:** Open.

**MATTERS TO BE CONSIDERED:** The Commission will hear oral argument on the following:

1. *Mid-Continent Resources, Inc. and American Mining Congress v. Secretary*

*of Labor and United Mine Workers of America*, Docket No. WEST 87-88.

(Issues include whether the administrative law judge erred in finding that a union official may be a designated representative of miners for walkaround purposes under Section 103(f) of the Mine Act even though the mine is non-union.)

Any person intending to attend this hearing who requires special accessibility features and/or auxiliary aids, such as sign language interpreters, must inform the Commission in advance of those needs. Subject to 29 C.F.R. § 2706.150(a)(3) and § 2706.160(e).

**TIME AND DATE:** Immediately following oral arguments.

**STATUS:** Closed [Pursuant to 5 U.S.C. § 552b(c)(10)].

**MATTERS TO BE CONSIDERED:** The Commission will consider and act upon the following:

1. *Mid-Continent Resources, Inc., etc. v. Secretary of Labor, etc.*, Docket No. WEST 87-88.

It was determined by a unanimous vote of Commissioners that this item be considered in closed session.

**CONTACT PERSON FOR MORE INFO:** Jean Ellen (202) 653-5629/(202) 708-9300 for TDD Relay.

Jean H. Ellen,

*Agenda Clerk.*

[FR Doc. 89-29695 Filed 12-18-89; 1:04 pm]

BILLING CODE 6735-01-M



# Summitry Act 1870

The Act of 1870, which was passed by the British Parliament, was a landmark piece of legislation that established the legal framework for the summitry of the British Empire. It was a response to the growing number of territories that were being acquired by the British, and it provided a clear and concise set of rules for the administration of these territories. The Act was a key part of the British imperial system, and it played a central role in the expansion of the British Empire.

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# Surface Coal Mining and Reclamation Operations

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Wednesday  
December 20, 1989

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## Part II

### Department of the Interior

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Office of Surface Mining Reclamation and  
Enforcement

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30 CFR Part 700 et al.  
Surface Coal Mining and Reclamation  
Operations; Exemption for Coal  
Extraction Incidental to the Extraction of  
Other Minerals; Final Rule



**DEPARTMENT OF THE INTERIOR****Office of Surface Mining Reclamation and Enforcement**

30 CFR Parts 700, 702, 750, 870, 905, 910, 912, 921, 922, 933, 937, 939, 941, 942, and 947

RIN 1029-AA53

**Surface Coal Mining and Reclamation Operations; Exemption for Coal Extraction Incidental to the Extraction of Other Minerals**

**AGENCY:** Office of Surface Mining Reclamation and Enforcement, Interior.

**ACTION:** Final rule.

**SUMMARY:** The Office of Surface Mining Reclamation and Enforcement (OSM) of the United States Department of the Interior (DOI) is adopting regulations relating to the exemption contained in section 701(28) of the Surface Mining Control and Reclamation Act of 1977 (the Act) concerning the extraction of coal incidental to the extraction of other minerals. This action provides guidance to the coal and noncoal mining industry and coal regulatory authorities concerning implementation of the exemption under section 701(28) and establishes criteria and procedures for determining whether an operation qualifies initially and on a continuing basis for the exemption. This action is necessary to halt and prevent abuse of the exemption. The final rule is intended to provide a fair and consistent basis for determining the applicability of the Act to operations producing both coal and other minerals in order to ensure that the mining of coal is appropriately regulated.

**EFFECTIVE DATE:** April 1, 1990.

**FOR FURTHER INFORMATION CONTACT:** Patrick W. Boyd, OSM, Department of the Interior, 1951 Constitution Avenue NW., Washington, DC 20240; telephone: 202-343-1864 (Commercial or FTS).

**SUPPLEMENTARY INFORMATION:**

- I. Background
- II. Discussion of Final Rule and Response to Comments
- III. Procedural Matters

**I. Background**

Section 701(28) of the Surface Mining Control and Reclamation Act of 1977 (the Act), 30 U.S.C. 1291, excludes from the definition of surface coal mining operations the extraction of coal incidental to the extraction of other minerals where coal does not exceed 16% percent of the tonnage of minerals removed for purposes of commercial use or sale. Operations meeting the above standard are thereby not subject as

surface coal mining operations to provisions of the Act such as permitting, bonding, and abandoned mine reclamation fee payments.

The incidental mining exemption first appeared in S. 425 introduced in the 93rd Congress (See Senate Rept. No. 402, 93rd Cong., 1st 160 (1973).) and was included in every major version of the Act before Congress between 1973 and 1977. The Congressional reports indicate that this provision was aimed at operations, such as limestone quarries, where the primary mineral being sought is something other than coal and comparatively small proportions of coal are recovered incidental to those operations. For example, see *Id.*, p. 74 and Senate Rept. No. 28, 94th Cong., 1st Sess. 224 (1975).

Regulations implementing this section of the Act were originally promulgated in 30 CFR 700.11(e) (44 FR 15315, March 13, 1979). This provision simply repeated the language of the Act. Similarly, for purposes of describing the applicability of the abandoned mine reclamation fee obligations of title IV of the Act, 30 CFR 870.11(d) (1979) also generally recited the language of the proviso.

Because § 700.11 did not contain provisions prescribing how those seeking an exemption from the applicability of the Act could request one from the regulatory authority or prescribing how the regulatory authority, on its own initiative, could make a written determination that an operation is exempt, OSM added such provisions when § 700.11 was reorganized on August 2, 1982 (47 FR 33424). In the reorganization, the incidental mining exemption, formerly § 700.11(e), was shifted to § 700.11(a)(4). New procedures were added at § 700.11(c), which provide that the regulatory authority may make a written determination, when requested, whether the operation is exempt and that the person requesting the exemption has the burden of establishing the exemption. Section 700.11(c) also provides that if a written determination of exemption is reversed through subsequent administrative or judicial action, any person who, in good faith, has made a complete and accurate request for an exemption and relied upon the determination, will not be cited for violations which occurred prior to the date of reversal.

On June 30, 1982, OSM revised 30 CFR 870.11(d), governing abandoned mine land fee obligations, and imposed a tonnage measurement constraint under which operators had to qualify for the exemption during any twelve

consecutive months (47 FR 28574, 28594). As discussed below, this final rule revises § 870.11(d).

Because the 1979 and 1982 regulations at 30 CFR 700.11 did not provide specific guidance for determining whether an operation is exempt, OSM published an advance notice of proposed rulemaking and request for public comment on section 701(28) of the Act in the Federal Register on May 7, 1984 (49 FR 19336-19340). At the same time, OSM published guidelines intended to assist operators and the States in implementing this exemption pending promulgation of final regulations. The guidelines established a two-part test for the exemption. An operator desiring to qualify for the exemption had the burden of establishing that the extraction of coal (1) is incidental to the extraction of other minerals and (2) does not exceed 16% percent of the mineral tonnage removed for commercial use or sale. Under the guidelines, whether an operation was "incidental" was a question of fact to be determined by the regulatory authority based on information required to be submitted by the operator. The documentation could include information on volumetric calculations, the physical layout of the mine site, stockpiles and production records. Among other provisions, the guidelines also required the operator to request a written exemption from the regulatory authority. For the complete text of the guidelines for implementing the incidental mining exemption issued in 1984, see 49 FR 19338.

After considerable discussion and public comment gathered through a regulatory outreach process, OSM published proposed rules on June 1, 1987 (52 FR 20546-20552). The proposal was characterized by a three-part test for the incidental mining exemption. An operator wishing to obtain the exemption would have the burden of passing (1) the "tonnage" test whereby the tonnage of coal must not exceed 16% percent of the tonnage of minerals removed for reasonable commercial use or bona fide sale over the life of the mining operation, (2) a "stratigraphic" test whereby the coal produced must lie above or immediately below the deepest stratum of other minerals extracted, and (3) a "commercial value" test whereby the other minerals produced must be commercially valuable either at the time of application for the exemption or in the reasonably foreseeable future, not to exceed twelve months. The proposal also required the operator to give notice to the regulatory authority of its



intention to rely on the exemption at least 30 days (for new operations) or 60 days (for existing operations that intend to continue operations after the end of the 60-day period) prior to commencement of operations. Please refer to the **Federal Register** notice cited above for detailed coverage of all provisions of the proposed rules. The proposal allowed for a public comment period of 70 days. A public hearing on the proposed rule was held in Columbus, Ohio, on August 3, 1987.

In response to public requests and to provide for proposed modifications to the regulatory text of the proposed rules, the proposed rules were modified and the public comment period was reopened on February 24, 1988, for 30 days (53 FR 5430-5433). Major features of the modifications included requiring application for and approval of the exemption before operations could commence (or continue for more than 90 days after the effective date of the final rule) and an annual reporting requirement related to the tonnage test. Additional aspects of the modified proposal are discussed in the above cited **Federal Register** notice.

Subsequently and in response to comments received on earlier proposals, particularly comments from the House Committee on Interior and Insular Affairs, OSM issued additional modifications to the proposed regulatory text and reopened the public comment period for an additional 30 days (53 FR 13415-13417, April 25, 1988). This set of modifications was characterized by the addition of a fourth test, the revenue test, that an operator would have to pass in order to obtain the incidental mining exemption. The operator would have the burden of establishing that the revenue derived from the coal extracted would not exceed 50 percent of the total revenue derived from the coal and other minerals extracted from the same mining area. In addition, initial and annual reporting requirements for revenue were proposed. Refer to the **Federal Register** notice cited above for a full discussion of the modified proposal. The most recent comment period closed on May 25, 1988. OSM received many comments from public interest groups, industry associations, mining and mining-related firms, and State regulatory authorities. As discussed in the next portion of the preamble to this final rule, OSM gave full consideration to all comments received. Any changes in the final rule from the proposed rules are identified in the following detailed discussion of the final rule.

## II. Discussion of Final Rule and Response to Comments

### A. Legal Basis for the Final Rule

Activities and areas regulated under the Act are specified in the definition of the term "surface coal mining operations," which contains this important proviso:

\* \* \* *Provided, however, that such activities do not include the extraction of coal incidental to the extraction of other minerals where coal does not exceed 16% per centum of the tonnage of minerals removed for purposes of commercial use or sale* \* \* \* (30 U.S.C. 1291)

The Act does not define the terms "incidental" or "other minerals" for purposes of this proviso and does not specify the period of time over which the tonnage constraint applies. Thus the Secretary of the Interior (the Secretary) may interpret the Act in a reasonable manner, consistent with whatever Congressional intent that may be inferred. Authority for this rule is also found in sections 201(c)(2), 412(a) and 501 of the Act. The legislative history of the proviso indicates that it is intended "to exclude operations, such as limestone quarries, where coal is found but is not the mineral being sought." Sen. Rept. No. 28, 94th Cong., 1st Sess. 98 (1975). Apart from that sentence, the legislative history provides little guidance on how Congress intended that the exemption be implemented.

The earliest known version of the incidental mining exemption was proposed by a limestone operator, Carbon Limestone Company, based on the fact that its open limestone quarry, which bottomed out 117 feet below the surface, had an overburden that included a 24-inch coal seam above the limestone produced. Hearings, 93rd Cong., 1st Sess. 1680-1 (April 9, 10, 16 and 17, 1973). Carbon Limestone proposed the following exemption:

Provided that where the extraction of coal is incidental to the extraction of other minerals and the tonnage of coal extracted does not exceed 15% of the total saleable production, the operation shall not be deemed surface mining of coal.

The proviso first appeared in bill language subsequent to the 1973 hearings. OSM has consistently interpreted the statutory language and the legislative history to imply that Congress intended that the incidental mining exemption be based both on tonnage and on whether the coal extraction is incidental to the extraction of other minerals.

It has, however, been argued that if Congress had intended such a two-part test, it would have connected the two

statutory phrases "the extraction of coal incidental to the extraction of other minerals" and "coal does not exceed 16% per centum of the tonnage of minerals removed" with the conjunction "and." However, OSM believes that Congress intended more than a simple tonnage test. If Congress had meant for the exemption to be based solely on tonnage, the provision could have been written, "that such activities do not include the extraction of coal where coal does not exceed 16% per centum of the tonnage of minerals removed." OSM believes that Congress included the phrase "incidental to the extraction of other minerals" for a purpose, not merely as superfluous language. That purpose is that the exemption be based both on tonnage and on whether the coal extraction is incidental to the extraction of other minerals.

In recent court decisions and administrative hearings before the DOI, the requirement that the incidental mining exemption is based on more than just the relative tonnages of coal and other minerals extracted has been upheld. In *United States v. Beaird Coal Co.*, No. CV-84-V-0850-J slip op. at 9 (N.D. Ala. Mar. 10, 1986), *rev'd on other grounds*, 825 F.2d 1471 (11th Cir. 1987), the court stated that "even though [the defendant's] coal production did not exceed the 16% percent limit," the court was "not reasonably satisfied that the mining of coal by [the defendant] was incidental to its extraction of other mineral." In *S&G Excavating, Inc. v. United States*, No. 137-85C, slip op. at 8 (Cl. Ct. July 5, 1988), hereafter *S&G*, the Claims Court was "unable to conclude that OSM's interpretation of the statute is unreasonable," and therefore, applied both the tonnage test and an interpretation of the term "incidental" to the particulars of the case. In *McNabb Coal Co. v. OSMRE*, 181 IBLA 282, 289 (March 15, 1988), hereafter *McNabb*, heard before the Interior Board of Land Appeals (IBLA), the administrative judge found that "the statute clearly provides the extraction of coal must be incidental to the mining operation, as well as constituting less than 16% percent of the tonnage produced." On April 28, 1989, the IBLA decision was affirmed. See *McNabb Coal Co. v. Lujan*, No. 88-C-281-E (N.D. Okla. 1989).

Although the Secretary has consistently asserted that to be exempt an operator must separately meet the "tonnage" and "incidental" elements, in the absence of a regulation specifying what is meant by "incidental," various approaches have been used. In this rulemaking, OSM has examined the merits of the alternatives, seeking a



clear and practical way to delineate the boundaries of the term "incidental" for the purposes of applying the incidental mining exemption, consistent with the Act. All of these approaches have been aimed at determining, in accordance with the legislative history, which minerals are primarily being sought.

OSM believes that the "incidental" element of the exemption should be based on specific, objective criteria that clearly distinguish exempt operations from surface coal mining operations for both operators and regulatory authorities. To this end, OSM has decided to employ two straightforward and easily measured criteria to define incidental mining, the stratigraphic test and the revenue test.

OSM believes that the "incidental" element of the exemption should be partly based on the actual physical location of the coal in relation to the other minerals mined. This is an easily administrable primary purpose test. For example, if a person's principal purpose is to extract and sell limestone, but must first mine through a coal seam to reach the limestone, the decision to mine the coal is governed by its physical location in the path of the mining activity. If that coal seam were not present, the person would still conduct the mining activity for the purpose of extracting the limestone. As a further example, if a person were mining limestone that occurred directly on top of a coal seam, that person would be likely to mine the coal as well since it would involve little additional cost. If the coal had not been present, the person may well have mined the limestone anyway. However, if the coal seam were not located in close proximity below the limestone, removal of the intervening, non-commercially valuable strata to reach the coal would tend to establish that the primary purpose, not just of the additional activities, but of the entire operation, was to extract the coal. In this case, the mining operation would not be exempt from the requirements of the Act. The stratigraphic test reveals the intentions of both current and prospective operators by focusing on the outward manifestations of those intentions. Therefore, OSM has interpreted the term "incidental" in this final rule partly in terms of the stratigraphic test whereby coal is produced from a geological stratum lying above or immediately below the deepest stratum from which other minerals are extracted for purposes of bona fide sale or reasonable commercial use.

In addition, the stratigraphic test will not ordinarily be subject to widely

varying interpretations. The relative positions of strata can be determined with precision even in the highly transformed Appalachian region. Depending on the direction or planned direction of the mining activity, exempt operations will encounter coal before the other mineral, or the coal will be immediately adjacent to or immediately below the other mineral without a substantial amount of intervening strata. The stratigraphic test also has the advantage of achieving a balance between protection of the environment and full utilization of coal by minimizing the potential for future disturbance of the land to recover coal.

The revenue test, whereby no more than 50 percent of total revenue may be derived from coal, is also an effective tool for identifying the operations where coal extraction is incidental to the extraction of other minerals. The test is objective and easily measured and will complement the stratigraphic test by providing another means of assessing the primary purpose of a mining operation. Clearly, the revenue generated by a mining operation of a vital factor in any kind of economic or financial analysis of the operation and is a key element in determining the primary purpose of an operation.

Previously, in the absence of a definite regulation, several approaches have been taken to determining the financial implications of the term "incidental." Some have interpreted the *McNabb* decision as promoting the use of an economic viability test to determine if an operation is or will be exempt. OSM believes that in the absence of a rule the IBLA was merely applying the 1984 guidelines, which call for an evaluation of all relevant factors, and due to the particular facts of the case, found an economic viability test an appropriate yardstick in that case alone. In *S&G*, the Claims Court acknowledged that the stratigraphic test is "easy to apply," but preferred a "primary purpose test," involving "an analysis of the totality of the circumstances."

OSM believes it would be an essentially unproductive exercise and administratively impractical to set up incidental mining exemption criteria that would be based on the totality of all factors. In contrast, the bright line test established by a revenue test is effective by directly comparing the revenue derived from the coal with that derived from other minerals and by allowing operators to know in advance the yardstick against which compliance will be measured.

Thus, for the reasons stated above, OSM believes that the most reasonable interpretation of the incidental mining exemption provision of the Act includes separate "tonnage" and "incidental" elements and that the most practical and effective way to implement the term "incidental" is to employ the stratigraphic test and the revenue test. The final rule adopted today is faithful to and reflects these principles. Based on an analysis of the issues involved, the legislative history of the Act, applicable court and administrative law decisions, and the administrative record of this rulemaking, including comments received, this final rule is a proper and reasonable interpretation of section 701(28) of the Act.

#### B. Effect of the Final Rule

The effective date of this rulemaking is April 1, 1990. OSM chose this date in recognition of the fact that many businesses customarily record and report information on a calendar quarter basis, thereby facilitating compliance with the reporting and recordkeeping requirements contained in this rule.

In States with Federal programs and on Indian lands, the entire rule becomes effective on April 1, 1990. In primary States, the application for exemption process, as well as the substantive standards established by this rule, will be phased in through the adoption of application requirements in the State programs. That is, no exemption application is due until the applicable State program requires such an application. Until a State program is modified by the incorporation of regulations promulgated pursuant to this final rule, operations and regulatory authorities should rely on the 1984 guidelines, as interpreted by recent legal decisions, particularly *McNabb* (discussed above), in implementing the incidental mining exemption.

This rule is not intended retroactively to bring under this Act activities that occurred prior to the effective date of this rule or the effective date of counterpart provisions of the State regulatory programs, which would not qualify for an exemption under the standards of this rule, but that did qualify under previous standards. Such operations would legitimately have relied upon standards in place to qualify for the exemption. Similarly, this rule is not intended retroactively to invalidate 30 CFR 870.11(a), as adopted in 1982.

#### C. Section 700.11(a)(4) Applicability.

Final § 700.11(a)(4), which is the exemption from the applicability of the Act for the extraction of coal incidental



to the extraction of other minerals, includes a cross-reference to 30 CFR part 702, which contains the specific rules implementing the incidental mining exemption in section 701(28) of the Act. The final rule is identical to the June 1, 1987 proposal. No comments were received on the proposed language.

#### *D. Part 702—Exemption for Coal Extraction Incidental to the Extraction of Other Minerals—Section-by-Section Analysis*

The final rule adopted today establishes a new part 702 relating to the exemption for coal extraction incidental to the extraction of other minerals.

##### *Section 702.1 Scope*

Final § 702.1 explains that part 702 implements the exemption contained in section 701(28) of the Act concerning the extraction of coal incidental to the extraction of other minerals where coal does not exceed 16% percent of the total tonnage of coal and other minerals removed for purposes of commercial use or sale over the life of the mining operation. The operations exempt under section 701(28) of the Act and part 702 are not subject to the environmental protection performance standards of Title V and abandoned mine reclamation fee provisions of title IV of the Act. OSM is, however, authorized to inspect and enter sites to verify the validity of claimed exemptions. Final § 702.1 is identical to the proposal.

One commenter was concerned about situations where coal is overlain by other marketable materials and asked whether coal or non-coal regulations would govern in those cases.

If only noncoal minerals and materials are mined, then the operation is not a surface coal mining operation and not subject to the Act. If, however, the operation is not an exploration activity and is not exempt under section 528 of the Act, and coal is mined along with noncoal minerals and materials, then the operation is a surface coal mining operation unless it qualifies under section 701(28) for a statutory exemption. Section 701(28) of the Act defines surface coal mining operations as not only "activities conducted on the surface of lands in connection with a surface coal mine \* \* \* the products of which enter commerce or the operations of which directly or indirectly affect interstate commerce," but also "the areas upon which such activities occur" to include "holes or depressions". Therefore, subject to the exemptions of section 701(28), whenever a non-exploration activity, which is also not exempt under section 528 of the Act,

conducted on the surface of land results in the extraction of coal, the activity is a surface coal mining operation.

##### *Section 702.3 Authority*

The June 1, 1987 proposal contained an authority section, proposed § 702.3, which identified sections 201, 412 and 501 of the Act as directing the Secretary to administer the program for controlling coal mining operations and to publish and promulgate such rules and regulations as may be necessary to carry out the purposes and provisions of the Act. Proposed § 702.3 also identified section 701(28) of the Act as providing an exemption to the requirements of the Act for the extraction of coal incidental to the extraction of other minerals where coal does not exceed 16% percent of the total tonnage of coal and other minerals removed for purposes of commercial use or sale. OSM has decided not to include proposed § 702.3 in the final rule because authority for a part in the Code of Federal Regulations (CFR) is cited at the end of the table of contents of the part.

Several commenters stated that OSM has exceeded its statutory authority and is violating the Constitution in promulgating this regulation.

OSM disagrees. The Act has been held to be constitutional and promulgation of this rule is authorized by the Act.

According to these same commenters, OSM is also changing the meaning, verbiage and intent of the legislative enactment, the meaning of which is obvious from the plain and ordinary language of the statute. Other commenters contended that the rule is contrary to case law and administrative decisions.

OSM disagrees with both sets of comments. As discussed above, OSM believes that section 701(28) sets forth a two-part test for the incidental mining exemption. The first part of the test is clear, i.e., coal cannot exceed 16% percent of the tonnage of minerals removed. The second part of the test, i.e., the coal extracted must be "incidental to the extraction of other minerals" was not defined in the statute. Nor did Congress provide guidance as to how the exemption was to be implemented. Congress did, however, direct the Secretary in section 201(c)(2) of the Act to "publish and promulgate such rules and regulations as may be necessary to carry out the purposes and provisions of this Act". Congress also gave the Secretary the authority in section 412(a) of the Act to "engage in any work and to do all things necessary or expedient, including promulgation of rules and regulations, to implement and

administer the provisions of this title." OSM believes that this rulemaking is necessary to carry out the purposes and provisions of the Act. As for the comments stating that the rule is contrary to court and administrative decisions, a thorough discussion of pertinent decisions and their relationship to the final rule is provided above.

One commenter requested that the following provision be included: "The Secretary shall indemnify an operation currently operating under a valid exemption in place before the final date of these regulations." The commenter argued that he is entitled to compensation because the regulation is "taking" under the "Glendale Lutheran Church case."

Although no citation was given, OSM believes that the commenter was referring to *First English Evangelical Lutheran Church of Glendale v. County of Los Angeles, California*, 107 U.S. 2378 (1987), hereafter *Glendale Lutheran*, which concerned a regulatory taking. OSM disagrees that this final rule will have the effect of a taking under *Glendale Lutheran* or any other case. The *Glendale Lutheran* case did not change substantive "takings" standards. It opened up the possibility that a taking requiring compensation could be established during the time that an invalid rule remains in effect. In the first place, this rule is not invalid. Secondly, it is not retroactive, and thirdly, a person who does not qualify for the exemption under this rule could obtain a permit to commence or continue mining coal. Thus, this rule does not have any significant takings implications and fully implements the Congressional directive to protect the environment from the adverse effects of surface coal mining operations.

##### *Section 702.5 Definitions*

Final § 702.5 provides definitions of the terms "cumulative measurement period," "cumulative production," "cumulative revenue," "mining area" and "other minerals."

As explained below, the exemption criteria of final § 702.14 provide that a person must annually satisfy both the tonnage test on a cumulative production basis and the revenue test on the cumulative revenue basis. "Cumulative measurement period" is defined at final § 702.5(a) and means the period of time over which both cumulative production and cumulative revenue are measured.

Production rates of coal and other minerals are usually not consistent over the life of the mining operation. In some years a relatively large amount of coal



may be produced; in other years coal production may be small or nonexistent. To avoid making such operations become subject to and not subject to the jurisdiction of the Act, as may occur under the 12 consecutive month test, and to avoid the unacceptable situation of applying the tonnage test after a mine has stopped producing, as may occur under a life-of-mine test, OSM is adopting a rule that measures production, adjusted for legitimate stockpiling, and revenue on a cumulative basis. The annual report required by final § 702.18 will be used by the regulatory authority to evaluate compliance of the operation with the exemption criteria on an annual basis. The cumulative measurement concept evolved in response to numerous comments critical of either the life-of-mine or annual tests, and the definition of this term was added to the final rule in response to those comments.

The definition of "cumulative measurement period" includes in final § 702.5(a)(1) a mechanism for determining the date from which cumulative production and revenue will be measured. For purposes of determining the beginning of the cumulative measurement period, subject to regulatory authority approval, the operator must select and consistently use (1) for mining areas where coal or other minerals were extracted prior to August 3, 1977, the date extraction of coal or other minerals commenced at that mining area or August 3, 1977, or (2) for mining areas where extraction of coal or other minerals commenced on or after August 3, 1977, the date extraction of coal or other minerals commenced at that mining area, whichever is earlier.

This provision is a logical extension of the decision to implement a cumulative standard for production and revenue. The purpose of the provision is to help the operator and the regulatory authority choose a starting date from which to calculate cumulative production and revenue for each mining area. The operator must use the starting date consistently in making production and revenue reports to the regulatory authority. The regulatory authority will be aided in administering the exemption by having a definite and consistent date from which cumulative production and revenue are calculated.

The definition of "cumulative measurement period" also includes a mechanism for determining the end of the period for which cumulative production and revenue are calculated in final § 702.5(a)(2). This provision is necessary for determining the period covered by the annual report required

under final § 702.18. For annual reporting purposes, the end of the period for which cumulative production and revenue are calculated is (1) for mining areas where coal or other minerals were extracted prior to April 1, 1990, March 31, 1989, and every March 31 thereafter, or (2) for mining areas where extraction of coal or other minerals commenced on or after April 1, 1990, the last day of the calendar quarter during which coal extraction commenced, and each anniversary of that day thereafter. This provision is necessary to provide appropriate guidance to both operators and regulatory authorities for determining the period covered by the annual report.

"Cumulative production" is defined at final § 702.5(b) and is the basis for measuring whether a mining area meets the tonnage requirement of the exemption in final § 702.14(a)(1). It is defined as the total tonnage of coal or other minerals extracted from a mining area during the cumulative measurement period. The definition explains that the inclusion of stockpiled coal and other mineral tonnages in the total is governed by § 702.16. The final rule provides that a mining area must satisfy the tonnage test on a cumulative production basis when each annual report is submitted.

"Cumulative revenue" is defined at final § 702.5(c) and is the basis for measuring whether an operator meets the revenue test of final § 702.14(a)(3). It is defined as the total revenue derived from the sale of coal or other minerals and the fair market value of coal or other minerals transferred or used, but not sold, during the cumulative measurement period. See the preamble to § 702.14 of the final rule for a discussion of fair market value. The final rule provides that a mining area must satisfy the revenue test on a cumulative basis when each annual report is submitted.

"Mining area" is defined at final § 702.5(d) as an individual excavation site or pit from which coal, other minerals and overburden are removed. The final definition differs from that proposed in June 1987 by substituting the phrase "coal, other minerals and overburden" for the proposed phrase "minerals and overburden." The change is intended to improve the clarity of the definition by employing terms that are themselves defined in the regulations. The primary purpose for the definition being limited to an individual excavation site or pit is to preclude an operator from averaging mineral tonnages from different locations to gain an unwarranted exemption from the Act. The definition also prohibits an

operator from claiming an exemption by combining production from distinct noncoal and coal operations. Each excavation site or pit must individually qualify for the exemption in accordance with the requirements for exemption under final § 702.14. OSM recognizes that a single excavation site or pit may, depending on its size, include a number of individual excavation activities. In this context, OSM considers a mining area to include the excavation activities occurring within a single excavation site or pit.

"Other minerals" is defined at final § 702.5(e) as any commercially valuable substance mined for its mineral value, excluding coal, topsoil, waste and fill material. The definition requires that the substance be mined for its mineral value, and therefore allows the regulatory authority the flexibility to consider local conditions in determining whether the mineral has commercial value. The exclusion of waste and soil from the definition of "other minerals" is intended to take into account material which is spoiled or otherwise disposed of without being used for its mineral value. Fill material is also excluded from the definition of other minerals. Including fill material is an "other mineral," or including fill as a valid commercial use of an "other mineral," could result in the inappropriate claiming of an exemption. For example, a person claiming the exemption could haul "overburden" to a site outside the mining area and claim the material is being commercially placed to prepare a site for construction, farming, etc. Allowing such claims could circumvent the provisions of the Act. A more definitive list of materials to be excluded from the definition of other minerals is not provided, as any attempt to list specific materials that are not "other minerals" runs the risk of excluding materials which may serve specialized uses and which may legitimately be exempt.

The definition of "other minerals" found in section 701(14) of the Act is not used in the final rule. It is clear from the legislative history that the section 701(14) definition is intended for use under section 709 of the Act, "Study of Reclamation Standards for Surface Mining of Other Minerals." See, for example, Sen. Rept. 93-402, 93rd Cong., 1st Sess. 75(1973) where the inclusion of the definition of "other minerals" is described in terms of the study "to provide a basis for future legislation to regulate surface mining and reclamation for these minerals." If applied in the context of section 701(28) of the Act, the broad section 701(14) definition could



likely lead to substantial abuse of the exemption.

Several commenters objected to the definition of "mining area" because it is limited to an "individual excavation site or pit." The commenters said the definition will result in "selected small acreage pits across the country suddenly becoming subject to expensive and burdensome reclamation requirements."

OSM did not change the proposed definition in response to these comments. The purpose of limiting the definition to an individual excavation site or pit is to preclude averaging mineral tonnages from different locations to obtain an unwarranted exemption from the Act. For example, if averaging were allowed, a pit from which nothing but coal is mined could be considered exempt because mining is conducted in coordination with another mine several miles distant where a different mineral is extracted. The definition therefore prevents an operator from claiming an exemption by combining production from distinct noncoal and coal operations. Each excavation site or pit may contain more than one area of active excavation, but must individually qualify for the exemption.

Other commenters argued that since section 701(28) of the Act uses the plural in defining surface coal mining operations, e.g., "activities, lands, products," etc., the definition of "mining area" is inconsistent with the Act.

OSM is not aware of a Congressional intent to exempt single mines, operations or activities from the Act. The use of the plural form in section 701(28) is simply an editorial decision. OSM's definition is in keeping with Congressional policy of striking a balance between protection of the environment and the Nation's need for coal.

Several comments were received on the definition of "other minerals." One commenter stated that exclusion of topsoil and fill material is inconsistent with the minerals mining laws of some States. This commenter encouraged OSM to use the commercial sale of the mineral as the basis for the exemption and not exclude topsoil and fill materials simply because of potential abuse. Another commenter asked if his company could continue to provide "fill dirt" to local farmers, developers and highway departments even though it is not a commodity of commercial value under the proposed definition. Several other commenters argued that the definition of "other minerals" should also include "overburden." In contrast, a number of commenters opposed the inclusion of topsoil, waste and fill

materials and stated that there are "abundant opportunities for abuse of the exemption if topsoil and/or fill material could be counted in the other mineral tonnage." These commenters believed that any operation can be engineered in such a way that coal constitutes only one-sixth of the total materials removed if overburden is included. The commenters indicated that by eliminating topsoil, subsoil, and overburden from consideration as an "other mineral" a significant window for abuse will be eliminated.

Congress intended this exemption to be limited in nature and to be used where incidental amounts of coal were found while producing other minerals. If fill dirt or overburden material could be used in calculations, coal mining operations could be engineered improperly to meet the 16% tonnage test. The result could be widespread abuse of the exemption resulting in damaged and unreclaimed areas with insufficient material available to ensure reclamation. While topsoil, waste and fill material may have some commercial value in particular instances, to allow these materials to be used in calculating the exemption would allow mining areas that Congress clearly did not intend to be exempt to obtain the exemption. Since opportunities for inflating the tonnage removed for purposes of commercial use or sale would be difficult to regulate, OSM believes that, in order to avoid unnecessary regulatory burdens, it is best to exclude them from the definition of "other minerals." As for the operator who provides area farmers, highway departments, etc., with "fill dirt," nothing in this rule would prevent the operators from continuing to provide this service consistent with applicable provisions of 30 CFR chapter VII. However, the operator cannot use the material transferred for purposes of calculating the tonnage requirements of final § 702.14(a), and if the operator is conducting surface coal mining operations, his activities must be performed in accordance with applicable regulatory requirements.

In response to the commenters who encouraged OSM to include "overburden" in the list of other minerals excluded from the definition of "other minerals," OSM believes that to include overburden would be confusing and is not necessary. While "overburden" has different meanings, OSM, for purposes of this rulemaking, considers it to be material of any nature, consolidated or unconsolidated, that overlies a deposit of useful materials, minerals, ores, or coal. Since this rulemaking addresses multiple strata of coal and other minerals which over

and/or underlay each other, the term "overburden" is confusing. In its definitions of "other minerals," OSM excludes topsoil, waste, and fill materials from being considered commercially valuable materials for the purpose of calculating cumulative production. By specifically excluding topsoil, waste, and fill materials and confining "other minerals" to commercially valuable substances mined for their mineral value, OSM intends that only minerals and materials that have a recognized commercial value be used in applying the exemption criteria of final § 702.14. OSM, therefore, believes further definition of "other minerals" to be unnecessary.

One commenter believed that the term "mining operation" needs to be defined, since several sections of the proposed rule (§§ 702.1, 702.2(d), and 702.14) would have evaluated the exemption based upon removal of coal and minerals over the "life of the mining operation." For the commenter, the terms "mining area" and "life of the mining operation" must be co-extensive, or else there will be a conflict. In particular, "life of the mining operation" must refer to all operations in a particular mining area in which both coal and other minerals are being extracted. The commenter further indicated that the "life of the mining operation" might be interpreted to cover several mining areas which are being concurrently or consecutively mined by the same company.

It is not necessary to define "mining operation" as requested by the commenter. By defining "mining area" to mean an individual excavation site or pit and requiring each mining area to be in compliance with all of the requirements of the rule, the physical extent of the overall mining operation is not relevant. No matter how extensive a mining operation may be or how many individual pits or excavation areas it encompasses, each pit and excavation area must comply with all the requirements of this part. Moreover, the rule adopted does not use the life of the mining operation concept about which the commenter was concerned.

#### Section 702.10 Information Collection

Final § 702.10 explains that the information collections contained in final §§ 702.11, 702.12, 702.13, 702.15 and 702.18 of part 702 have been approved by the Office of Management and Budget (OMB) under 44 U.S.C. 3301 *et seq.* and assigned clearance number 1029-0089. The information collected will be used to determine the initial and continuing applicability of the incidental



mining exemption to a particular mining operation. Response is mandatory for all those who wish to obtain and maintain the incidental mining exemption in accordance with section 701(28) of the Act. This section was inadvertently omitted from the proposals, but is included in the final rule because it is required by OMB. Inclusion of this section is technical in nature and imposes no requirements not otherwise contained in part 702.

#### *Section 702.11 Application Requirements and Procedures*

Final § 702.11 establishes the application requirements and procedures for obtaining the incidental mining exemption. It is based upon the February 24, 1988 proposal.

Final § 702.11(a)(1) states the application requirements. Any person who plans to commence or continue coal extraction in reliance on the incidental mining exemption after April 1, 1990, the effective date of these rules, under a Federal program or on Indian lands, or after the date of counterpart provisions in a State program shall file a complete application for exemption with the regulatory authority for each mining area. Final paragraph (a)(2) provides that once an application process is included in a regulatory program and except as provided in § 702.11(e)(3), an operator may not commence coal extraction based upon the exemption until the regulatory authority approves such application.

Final paragraph (a) differs from the June 1, 1987 proposal due to the change from a notice of exemption filing requirement to a procedure requiring application for and approval of an exemption. OSM believes that section 201(c) of the Act provides the necessary authority to require an application for exemption as opposed to merely a notice of exemption.

The final rule has been somewhat modified from proposed § 702.11(a) of the February 24, 1988 proposal, which only required new operations to file an application for exemption. The final rule states that the requirement to file a complete application for exemption applies to existing as well as new operations. Such a requirement could have been inferred from final § 702.11(b), but for clarity is included in final § 702.11(a). Also, OSM has inserted the phrases "after April 1, 1990 under a Federal program or on Indian lands, or after the date of counterpart provisions in a State program" in final paragraph (a)(1). OSM added these words to the final rule in recognition of the fact that under primacy, in States with approved regulatory programs, it is the State

program procedures that apply, not the Federal regulations in this chapter. Under 30 CFR chapter VII, subchapter C, such States have the responsibility of conforming their regulations to be no less effective than the Federal regulations and operators are responsible for complying with the requirements of those State programs.

Final § 702.11(a)(2) is based on the second sentence of § 702.11(a) of the February 24, 1988 proposal. The final rule differs from that proposal by conditioning the prohibition on the commencement of coal extraction prior to exemption application approval on the incorporation of an exemption application approval process into the regulatory program. Such a condition recognizes that operators cannot apply for exemptions unless such a process is provided for in the State program. OSM recognizes that it will take time to incorporate the exemption application process into State programs. If the February 24, 1988 proposal had been adopted as proposed, no new operations could have claimed the exemption until the State program had been changed. To avoid the potential for a temporary taking, OSM modified the proposal accordingly.

Final § 702.11(b) states the application requirement for existing operations. Any person who has commenced coal extraction at a mining area in reliance upon the incidental mining exemption prior to April 1, 1990 in a Federal program State or on Indian lands, or prior to the effective date of counterpart provisions of a State regulatory program may continue mining operations for 60 days after such effective date. Coal extraction may not continue after such 60-day period unless that person files an administratively complete application for exemption with the regulatory authority. If an administratively complete application is filed within 60 days, the person may continue extracting coal in reliance on the exemption beyond the 60-day period until the regulatory authority makes an administrative decision on such application. The 60-day period is intended to provide operators who plan to apply for an exemption time to prepare the application. Any coal extraction that occurs during the 60-day period will be considered a de facto assertion of the exemption and will be subject to the enforcement provisions of § 702.17 of the final rule or its State program counterpart.

Final paragraph (b) differs from § 702.11(b) of the February 24, 1988 proposal due to the change in the final rule from a notice of exemption filing requirement to a procedure requiring

application for an approval of an exemption. The final rule also differs from the proposal by the insertion of the words "or the effective date of counterpart provisions of a State program" in the first sentence. These words were added to the final rule by OSM in recognition of the States' regulatory role under primacy and of the fact that an operator cannot file an application for an exemption until such a procedure is embodied in a State program. This change allows existing operations to continue during the interim that certain States may need to amend their programs. The final rule also differs from the February 1988 proposal, but is the same as the June 1987 proposal, in that existing operations are given 60 days, not 90 days, to submit an application for exemption. The 60-day standard was originally proposed, but was changed without explanation to 90 days in the February 1988 proposal. The 60-day standard is being retained in the final rule for consistency with the rules establishing a grace period for surface coal mining operations to apply for a permit (30 CFR 773.11).

Final § 702.11(c) is identical to the February 24, 1988 proposal and states that the regulatory authority shall notify the applicant if the application for exemption is incomplete and may at any time require submittal of additional information. The final rule differs from the June 1, 1987 proposal in providing for notification of the application if the application for exemption is incomplete instead of notification of the persons submitting the notice of exemption if the notice is incomplete. This change makes the notification provision consistent with the requirement for an exemption application in final § 702.11(a).

Final § 702.11(d) is identical to the February 24, 1988 proposal and states that following publication of the newspaper notice required by final § 702.12(i), the regulatory authority shall provide a period of no less than 30 days during which time any person having an interest which is or may be adversely affected by a decision on the application may submit written comments or objections.

Final § 702.11(e) is, with the exceptions described below, identical to the February 24, 1988 proposal and address the exemption determination. Final paragraph (e)(1) states that no later than 90 days after filing of an administratively complete application, the regulatory authority shall make a written determination whether, and under what conditions, the persons claiming the exemption are exempt



under this part, and shall notify the applicant and persons submitting comments on the application of the determination and the basis for the determination. OSM decided that persons submitting comments should be notified of the determination and its basis so that they would have the opportunity to file for administrative review of the determination.

Final paragraph (e)(2) provides that the determination of exemption shall be based upon information contained in the application and any other information available to the regulatory authority at that time. This provision was added to the final rule by OSM in order to clarify the basis for the regulatory authority's determination of exemption.

Final paragraph (e)(3) states that if the regulatory authority fails to notify an operator as specified in paragraph (e)(1) of this section, an operator who has not begun may commence coal extraction pending a determination on the application unless the regulatory authority issues an interim finding, together with reasons therefor, that the operator may not begin coal extraction. A change made by OSM to § 702.11(e) of the final rule is to make the 90-day period for decision on the application for exemption begin after the filing of an administratively complete application, not after publication of the required newspaper notice. OSM made this change to ensure that the public has an opportunity to comment on administratively complete applications for exemption.

Final § 702.11(f) provides for administrative review of regulatory authority decisions on applications for exemption. Final paragraph (f)(1) incorporates the substance of § 702.11(f) of the February 24, 1988 proposal and provides that any adversely affected person may request administrative review of exemption application determinations within 30 days of notification of such determination according to Federal or State procedures, whichever are applicable. Final paragraph (f)(2) was added to the final rule by OSM and provides that a petition for administrative review filed either under Federal or State procedures shall not suspend the effect of a determination on an application for exemption. This provision is intended to allow determinations to take effect without the delay required for resolution of an administrative review request. Of course, those seeking administrative review of a determination have the right to seek a temporary stay in accordance with the provisions of the applicable regulatory program.

Numerous comments were received on the issue of whether an operator should file a notice of exemption or be required to submit an application requiring approval of the regulatory authority. Comments received opposing the application requirement offered the following reasons: (1) The existing regulatory scheme which allows for the filing of a voluntary notice is adequate to identify and penalize violators of the exemption, and/or (2) an application requirement would place a significant and unjustified financial and manpower burden on industry without providing commensurate additional protection to human health and the environment. One comment acknowledged that a change from a notice to an application would not make much difference to "legitimate industrial mineral operators mining in a State having regulations controlling the mining and reclamation practices of such companies." The commenter did, however, offer the proviso that the State regulatory authority must effectively blend the reporting requirements of the coal and other minerals regulations in such a manner as to eliminate any additional paperwork. Comments received in favor of an application requirement contended that a formal application is necessary to prevent abuse of the exemption.

After reviewing all comments on the issue, OSM has decided to adopt the proposed requirement that all mining operators claiming the exemption must make application for the exemption as provided in final §§ 702.11 and 702.12. OSM believes that an application requirement is necessary and reasonable as a measure to help assure that the operations claiming the exemption are, in fact, entitled to the exemption. OSM has made the application requirements as free of burden and expense as possible while at the same time providing sufficient information for the regulatory authority to evaluate the claim to exemption. While OSM encourages State regulatory authorities to make every effort to blend the requirement for an exemption application with the requirements of other coal and minerals regulations, the specific method used by each State to ensure that the requirement is met is best determined by the individual State regulatory authority.

One commenter proposed that the term "coal extraction" used in proposed § 702.11 (a) and (b) be replaced with the term "coal sales and use." The purpose of the suggested substitute language was to eliminate the delays in obtaining a new exemption on a site by allowing the applicant to commence the removal of

the coal and other minerals but not allow any disposal of the coal until the application was approved. The commenter noted that a delay of 3-4 months in filling a customer's order for other minerals might result while the application for exemption is being processed and thus the operator would suffer economic loss. The delay and economic loss would occur if there were coal overlaying the other mineral being mined. Other commenters contended that if an operator with a permit to mine "other minerals" unexpectedly encounters coal, no coal should be removed until an application for exemption has been approved by the regulatory authority. The commenters reasoned that it would be unlikely that coal would be unexpectedly encountered. These commenters said that it would be likely that other areas of the other mineral operation might be mined while the application for exemption is pending.

The inconvenience addressed by the commenters primarily relates to new operations because existing operations may continue to extract coal if an administratively complete application for exemption has been timely filed. Final § 702.12(j) requires that the application for exemption include test borings or other information to show relative position and approximate thickness of the coal, other minerals and any material not classified as other materials. Such information should allow new operations to avoid coal extraction while their applications for exemption are pending. Because mining procedures are costly, operators do not blindly pursue coal or other minerals but specifically target the substance that they seek. OSM believes that in many instances modern mining methods are sophisticated enough to allow other minerals to be extracted while an application for an incidental mining exemption is being processed. Despite the possibility that certain activities could be delayed, delays are not expected to be excessive because of the provisions of final § 702.11(e)(1) and (3). Therefore OSM does not believe the rule language needs to be changed as requested by the commenters.

One commenter stated that no exemption should be granted to a person who holds or intends to apply for a surface coal mining permit in the same watershed. For this commenter, the potential for abuse of the incidental mining provision is "very similar to that of the two-acre exemption, when carefully engineered sites are strung together in order to subvert the Act and



to cause substantial damage without regard for environmental controls."

OSM disagrees. Since each individual pit or excavation site must comply with all the provisions of this part, sites cannot be "strung together" to subvert the Act.

One commenter stated that existing operations that have been considered exempt from surface mining regulations should be provided with a "grandfather clause" exempting them from the application requirements of proposed § 702.11(b).

OSM does not agree. One of the principal purposes of this rule is to identify and then to deny an incidental mining exemption to future activities of existing operations that have claimed the exemption, but whose actual coal extraction is not incidental as intended by Congress. A "grandfather provision" would be counterproductive to this purpose.

One commenter observed that some existing operations may not be able to meet the requirements of this part and obtain an exemption. These operations will then be forced to get a coal permit. Since it takes time to get a permit, the commenter asked whether the coal should continue to be mined in the process of extracting other minerals and simply "spoiled," i.e., treated as overburden. The commenter's concern was that coal is a resource to be utilized, not destroyed, and argued that "philosophically it is not correct, economically it is unsound and environmentally it is absolutely ridiculous to take a potentially usable toxic substance and spoil it."

Under final § 702.11(b), an existing operation may continue to mine coal for 60 days following the effective date of this final rule or counterpart provisions of a State regulatory program. If after that 60-day period, the operation has not applied for an exemption, no further coal extraction may take place. The operator may apply for a coal mining permit at any time, however. The operator will be liable for violations of the appropriate regulatory program in existence after the 60-day period. Application for a coal mining permit does not forestall the reclamation obligation.

One commenter requested that the interim finding of § 702.11(e)(2) of the February 1988 proposal and accompanying reasons should be detailed and sufficiently specific to allow an applicant to attempt to cure any problem set forth in the application and to preclude the regulatory authority from presenting additional reasons for denial after an applicant has responded to an interim finding.

OSM agrees that the reasons supporting an interim finding under final § 702.11(e)(3) should be sufficiently detailed to allow the applicant to understand the basis for the regulatory authority's action. OSM, however, does not agree with the remainder of the comment. An applicant's response to reasons or issues raised by an interim finding may generate new or additional issues relevant to a determination of exemption. To preclude a regulatory authority from ever considering new or additional reasons that might arise out of an applicant's response to an interim finding is not reasonable and would expose the application review process to potential abuse.

Several commenters proposed that a second newspaper notice should be published after receipt of notice from the regulatory authority that the application is deemed administratively complete. They argued that it is in the best interest of the regulatory authority to fully involve the public in the review of the proposed exemption.

OSM agrees that the public should be fully involved in the exemption application process. However, to avoid the expense of two notices, OSM has changed the final rule at § 702.12 to require publication of notice only after an administratively complete application has been received.

Some commenters urged OSM to set forth "interim standards" that must be met by the operator during the period after application for exemption but prior to approval. The commenters argued that this approach will avoid abuse of the exemption or the tacit approval of that abuse resulting from the regulatory authority's failure to make a determination on the application for exemption. The commenters further urged that the interim standards which they propose should include those operations which are still extracting any material, whether it is coal or other mineral, from the mining site. Other commenters disagreed with the provisions of proposed § 702.11 which would allow interim operation while an application is pending if the agency fails to respond within 90 days and urged OSM to affirmatively act to preclude such activity. These commenters believed that the time frame for review must not begin to run until after the application is complete, "lest the applicant be allowed to submit inadequate information and be allowed to operate because of the delay in review that it has created." For these commenters the "interim procedure is contrary to prudent procedure in dealing with applications, since the agency may need additional time to review more

questionable or close call situations." The commenters asserted that the provisions require "allocation of agency resources to making and defending an interim finding which are better spent on substantive review." The commenters suggested that OSM "eliminate the interim operation procedure" and allow sufficient time after submission of an administratively complete application for making exemption determinations.

OSM does not intend for operators to take unfair advantage of the interim finding provisions of final § 702.11(e)(3), and has modified the text with regard to when the regulatory authority must act. Under the provisions of final § 702.11(a), once an application process is included in a regulatory program, persons who plan to commence coal extraction following the effective date of the rules cannot do so until the regulatory authority approves the application. Only if the regulatory authority fails to act in 90 days after filing of an administratively complete application can new operations commence coal extraction. If delay by the applicant in submitting information is the basis for the regulatory authority not being able to make a final determination on the application within 90 days, that certainly would be a sufficient basis for making an interim finding under final § 702.11(e)(3). Moreover, concern should not exist over the standards that apply to operations commencing under final § 702.11(b) or (e)(3). Under final § 702.15(c), such operations may proceed under the exemption only when they conduct their operations in accordance with the standards of part 702 or counterpart provisions of the State regulatory program while their applications are pending before the regulatory authority. For instance, during the period before approval of the application, the applicant must satisfy the cumulative revenue and tonnage requirements of § 702.14. If operators do not comply, they are liable for violations of the Act or the regulatory program and subject to the payment of abandoned mine reclamation fees (final § 702.17(d)). Thus, the final rule sets forth adequate safeguards to prevent abuse.

A commenter stated that a comment period should not be required as part of the exemption because the delay inherent in such a procedure is overly burdensome. In contrast, other commenters urged OSM to retain the provision requiring public comment.

OSM has decided to retain the minimum 30-day public comment period in order to allow persons who may be adversely affected by the application for



exemption or a decision on such an application the opportunity to submit written comments or objections to that application or decision. The receipt of public comments from interested persons is seen as part of the initial phase of a very necessary sequence of reviews conducted during the life of a mining operation to assure that an incidental coal mining exemption is justified and that the applicant is, in fact, an "other mineral" operator. This is consistent with the Congressional purpose of section 102(i) of the Act "to assure that appropriate procedures are provided for the public participation in the development, revision, and enforcement of regulations, standards, reclamation plans, or programs established by the Secretary or any State under this Act." Any administrative delay experienced by an "other mineral" operator in the processing of its application because of the provision for a public comment period will be more than offset by the benefit derived from public comments in assisting the regulatory authority to evaluate the application.

One commenter requested that the public, as well as an operator, have the right to appeal from the regulatory authority's decisions on the exemption.

The right to appeal from the regulatory authority's decisions is specifically granted to adversely affected parties by § 702.11(f) of the final rule.

One commenter argued that preparation and processing of the application annually would be too costly and suggested a five-year interval.

OSM did not accept the comment since an annual application was not intended, proposed or adopted. The information that must be included in the annual report required under final § 702.18 is not as extensive as that which must be included in the application and should be easily assembled based on information gathered for other purposes.

#### *Section 702.12 Contents of Application for Exemption*

Final § 702.12 identifies the minimum information that must be included in an application for exemption. The name and address of the applicant are required by § 702.12(a) to enable the regulatory authority to identify and contact the applicant. The term "applicant" is used in final § 702.12(a), rather than "operator" as proposed in June 1987, to reflect that the final rule employs an application process. A list of the minerals sought to be extracted is required by final § 702.12(b). This

requirement was included in all the proposals.

Estimates of annual production of coal and other minerals within each mining area over the anticipated life of the mining operation and estimated annual revenues to be derived from bona fide sales of the coal and other minerals to be extracted within the mining area are required by final § 702.12(c) and (d) respectively. Under final § 702.12(e), estimated annual fair market values at the time of projected use must be submitted by the applicant where coal or other minerals to be extracted from the mining area are to be used rather than sold. When the coal or other minerals extracted are used by the operator or a related entity instead of being sold, no revenue is obtained from the material used. The appropriate economic factor to consider in such instances is the fair market value at the time of projected use of the coal and other minerals to be extracted. As quoted in the recent Claims Court case, *Whitney Benefits, Inc., and Peter Kiewit Sons' Co., v. the United States*, No. 499-83L (Cl. Ct. October 13, 1989), slip op. at 17-18, the Supreme Court has defined fair market value as:

The amount that a willing and informed buyer of mining properties, under no compulsion to buy, will pay, and what a willing and informed owner, under no compulsion to sell, will accept for property, after fair and voluntary dealing, and taking into account all those factors which such willing and well informed persons would consider regarding the property in light of the custom of the industry.

*United States v. Miller*, 317 U.S. 369, 373-74, *reh'g denied*, 318 U.S. 793 (1943).

OSM intends that the above standard be applied in determining the value of coal or other minerals transferred to a related entity or used, rather than sold. The production, revenue and fair market value information will allow the regulatory authority to evaluate whether the operation will be able to comply with the exemption criteria of final § 702.14.

Final § 702.12(f) requires the submittal of the basis for all annual production, revenue and fair market value estimates. By requesting basis of such estimates, in addition to the figures themselves, the regulatory authority will be able to verify independently the applicant's calculations. Final § 702.12(c), (d), (e), and (f) are virtually identical to § 702.12(b) of the April 1988 proposal, except that the final rule incorporates the idea of annual measurement of cumulative production and revenue, a concept that was added in response to comments and is discussed in the preamble to final § 702.14.

The requirements of final § 702.12(g) and (h) are, respectively, a description, including county, township if any, and boundaries of the land, of sufficient certainty that the mining area may be located and distinguished from other mining areas over the anticipated life of the mining operation. This information will enable the regulatory authority to locate and distinguish the sites of proposed and existing operations. These paragraphs were proposed as § 702.12(c) and (d) in June 1987.

Public participation in the application process is provided by final § 702.12(i). This paragraph requires evidence of publication, in a newspaper of general circulation in the county of the mining area, of a public notice of filing of an application for exemption with the regulatory authority. The public notice must identify the persons claiming the exemption and must contain a description of the proposed operation and its locality that is sufficient for interested persons to identify the operation. One public notice may contain information on more than one mining area. Editorial changes were made to final paragraph (i) from the version published on February 24, 1988 as proposed § 702.12(e).

The next three application information requirements of the final rule, § 702.12(j), (k), and (l) are, respectively, representative stratigraphic cross-sections showing relative position and approximate thickness and density of the coal and each other mineral to be extracted for commercial use or sale and the relative position and thickness of any material, not classified as other minerals, that will also be extracted during the conduct of mining activities; a map of appropriate scale which clearly identifies the mining area; and a general description of mining and mineral processing activities for the mining area. This information will allow the regulatory authority to evaluate the tonnage ratio of coal to other minerals. These paragraphs were included in the June 1987 proposal as proposed § 702.12(f), (g) and (h).

In final § 702.12(m), the applicant is required to provide a summary of sales commitments, if any, which the applicant has received for other minerals to be extracted from the mining area or a description of potential markets for such minerals. Final § 702.12(n) requires the applicant to submit a description specifying the use if the other minerals are to be commercially used by the applicant. The regulatory authority will use this information to verify that the other minerals expected to be extracted will



actually be commercially used or sold. These two paragraphs have been edited slightly from proposed § 702.12(i), which was contained in the June 1987 proposal.

Additional information requirements for existing operations are set forth in final § 702.12(o), which was proposed as § 702.12(j) in June 1987. In addition to complying with the other requirements for this section for the mining area over the life of the mining operation, existing operations must also submit pursuant to § 702.12(o)(1) any relevant documents the operator has received from the regulatory authority documenting its exemption from the requirements of the Act. The regulatory authority will use this information to verify that past activities of the existing operation are covered by a legitimately approved exemption and to aid in review of the current application. Paragraph (o)(2) requires documentation of the past cumulative production of coal and other minerals from the mining area. This information will be used by the regulatory authority to determine that the operation is entitled to the exemption based on the tonnage of coal and other minerals already extracted in relation to the potentially recoverable tonnages of coal and other minerals. New paragraph (o)(3) requires estimated tonnages of stockpiled coal and other minerals. This paragraph was added so that the regulatory authority may verify that the operation complies with the stockpile provisions of final § 702.16. Finally, as provided for in final § 702.12(p), the regulatory authority may request any other information pertinent to the qualification of the operation as exempt. This provision will enable the regulatory authority to request any information it deems necessary to make a determination of eligibility for the incidental mining exemption. It was proposed as § 702.12(k) on June 1, 1987.

The final rule differs from the June 1, 1987 proposal (1) in that the context within which the information is required is changed from information to be included in a notice of exemption to information to be included in an application for an exemption and (2) in the addition of information necessary to evaluate the operation's potential for compliance with the revenue test. In addition, the June 1987 requirement for two newspaper publications in proposed § 702.12(e) was modified to require only "evidence of publication" in final § 702.12(i). This change was proposed in February 1988. Also, final § 702.12(i) contains a requirement that the newspaper publication contain "a description of the proposed operation" instead of the requirement of proposed

§ 702.12(c) that the newspaper publication contain a description of "sufficient certainty that the mining area may be located and distinguished from other mining areas and surface coal mining operations." This change was made in response to public comments that requested clarification of the proposed rule. Finally, a new § 702.12(o)(3) was added to the final rule to reflect OSM's rule governing stockpiling contained in final § 702.16 and discussed in the preamble thereto.

One commenter requested that in order to avoid unnecessary duplication of paperwork, a single application, newspaper publication, and report be allowed for operations having more than one mining area.

OSM agrees that unnecessary paperwork and expense should be avoided and a single application, newspaper publication, and report could suffice for operations having multiple mining areas. OSM declines, however, to put a requirement in the rule that operations with multiple mining areas should file a single application, newspaper publication, or report. OSM believes that the matter should rest with the administrative discretion of the regulatory authority which is in the best position to determine how applications, publications, and reports should be filed or processed. Where OSM is the regulatory authority, one application will be allowed as long as the required information is specified separately for each mining area.

Several commenters requested that additional information be required in the application for exemption. Some commenters suggested that the application require evidence that the other mineral is sufficient in extent and recoverable in a quantity necessary to make the operation commercially viable without consideration of the additional value of the coal.

OSM did not change the final rule in response to this comment because independent commercial viability is not one of the standards under final § 702.14.

Some commenters suggested OSM require testing and sampling data that the other mineral is of the quality and quantity needed to be commercially valuable.

Since the applicant has the burden under final § 702.12(f) to establish to the regulatory authority's satisfaction the basis for all tonnage projections, the applicant may include, or be required to include by the regulatory authority, in the application for exemption, testing and sampling data to establish the

commercial value of the other minerals. In addition, pursuant to final § 702.12 (m) and (n), the applicant must summarize sales commitments or specify commercial uses of the other minerals. Thus, it is not necessary specifically to require testing and sampling to establish the commercial value of the other minerals.

Some commenters suggested that the application include historical data on the applicant regarding past coal and noncoal extraction activities and involvement of the owners, controllers, agents and contractors of the applicant with prior coal mining activities. The commenters argued that the existence of outstanding violations by any owner, controller, agent or contractor of the applicant of surface mining laws should "constitute a strong presumption against allowance of an exemption."

Final § 702.12(o) of the final rule requires that all operations that extracted coal or other minerals prior to filing an application for exemption submit any relevant documents the operator has received from the regulatory authority documenting its exemption, the cumulative production of the coal and other minerals from the mining area, and tonnage estimates of stockpiled minerals. This information will establish the applicant's past history with the exemption. OSM's authority under sections 201(c)(1) and 510 of the Act to withhold mining permits from violators, owners and controllers of violators, and those who are owned and controlled by violators does not extend to activities outside the jurisdiction of the Act, such as mining activities that qualify for the incidental mining exemption. It would be an inappropriate extension of its authority for OSM to withhold an incidental mining exemption due to the applicant's unabated violations because the exemption, by definition, applies to activities outside the scope of the Act. Furthermore, the requirements of final § 702.12 provide sufficient information to judge each applicant's claim to the exemption on its merits. State regulatory authorities can specify additional requirements that fit their local needs provided such additional requirements are no less effective than those contained in this rule.

Several commenters suggested that the application require evidence of the applicant's current ability to market the other mineral. These commenters believed that the allowance of anticipated future markets would create an enormous loophole for abuse. Some commenters wanted historical and current evidence of the existence of a



market for the other mineral. Other commenters urged OSM to require that the other mineral have a "recognized" market and provide evidence of a "generally acknowledged" regional, state, or national market. In contrast, another group of commenters noted that established operations might not currently have at the time of application any orders for the other mineral simply because of fluctuations in supply and demand. These commenters believed that allowance should be given for an existing operator's "opinion, past sales, local geographic growth, and economic conditions."

OSM is aware that because of the yearly cyclical nature of the market for many other minerals, applicants at one season of the year may not be able to establish a current "spot" market. They could, however, reasonably anticipate on the basis of the historical spot market that a future spot market will exist, for example, in the spring as is usually the case with the construction business. Final § 702.12(f) requires that the application include the basis for all tonnage projections. If there is no current market for the other mineral, the applicant will have to establish on the basis of a historical market or other evidence that a market for the mineral will exist. The burden is on the applicant. For these reasons, § 702.14(b)(1) of the final rule specifies that a legally binding agreement for the future sale of other minerals is sufficient to demonstrate the existence of markets for other minerals.

Several commenters opposed the consideration of a local market in the determination of the other mineral's commercial value. These commenters asserted that a local market is too susceptible to manipulation to be used as a gauge of commercial value. Kentucky's regulations were cited as an example of a State which excludes consideration of a local market and requires a State, regional or national market (405 KAR7:030, section (3)(1)(e)).

OSM does not agree. While the local market might be more susceptible to manipulation than other markets, the largest market served by many "other minerals" operators is the local market, and, as such, should not be excluded from determining the commercial value of the mineral. Crushed limestone for the local construction industry would be an example of this point. Because of transportation and marketing factors, the actual market served by other mineral operators may not be the State or regional market but some smaller local market. In these cases, therefore, it is the local market that must establish

the value of the mineral. If the exemption application reflects a local market that varies significantly from the larger State, regional or national markets for a particular other mineral, then scrutiny of the local market by the regulatory authority is justified.

One commenter recommended that the application include a detailed operational plan with four-month tonnage projections with provision for suspension or revocation of the exemption if the operator fails to meet the four-month plan.

OSM does not agree with a four-month plan concept. To base the continuation of the exemption on compliance with a four-month tonnage plan prepared years before the initiation of mining gives no allowance for the recognized uncertainties of the business world. Additionally, to require the figures to be adjusted every four months would be too burdensome of both the operator and the regulatory authority. The annual production estimates and reporting contained in this part provide a more reasonable basis by which to judge the legitimacy of the exemption.

Several commenters objected to the April 25, 1988 proposal's use of life-of-mine figures based on projected tonnage and market value because of the subjective nature of such projections and the possibility of substantial error.

OSM agrees that it is difficult to accurately project the market value of coal and other minerals. However, the final rule contains two safeguards against inaccurate projections. First, by requiring submittal of the basis for all annual production, revenue and fair market value estimates, the rule allows the regulatory authority to ensure that the estimates are calculated according to a rational, mutually agreeable formula. Secondly, the final rule provides for reassessment of the exemption based on annual reporting of cumulative production and cumulative revenue. This provision will enable the regulatory authority to evaluate compliance with the exemption criteria on an ongoing basis taking into account changes in the market for coal and other minerals.

In response to the April 25, 1988 proposal, several commenters recommended that the applicant require that the current market value of the local and other minerals be used in making life-of-mine revenue projections.

OSM did not specify in the final rule a method for estimating annual production, revenue or fair market value because it did not wish to place any limitation on how such estimates may be developed. Estimates may be based

on current market value, or on another benchmark, provided that the application can convince the regulatory applicant can convince the regulatory developed are rational and give a reasonably accurate picture of the mining area's ability to comply with the exemption criteria.

One commenter suggested that the proposed requirement of a newspaper publication providing for public notice of filing of the application for exemption should be modified to provide the site location and information on where the application is located.

While OSM agrees that the public notice must provide sufficient information to enable the public to locate the mining operation, it believes the specific contents of the public notice should be left to the individual regulatory authorities so that there can be consistency in their internal process for public notices in their jurisdictions. The notice provision of final § 702.12(i) has been amended to provide for "a description of the proposed operation and its locality that is sufficient for interested persons to identify the operation." This change should provide sufficient guidance to the regulatory authorities while leaving them the discretion to require any specific information they may need or that is required by their administrative processes.

In regard to proposed § 702.12(f) which would require test boring or other information on the minerals and their positions, several commenters stressed the importance of requiring cross sections based on test borings to show the "exact" position and "precise" thickness and density of coal and each of the other minerals to be mined. The commenters stressed that this would provide the regulatory authority with the specific information about seam thickness and positions which is needed to make accurate evaluation of mineral and tonnage ratios.

It is unnecessary to require exact or precise information in § 702.12(j) of the final rule. The burden of establishing the exemption is on the applicant, and the regulatory authority may decide that an applicant's information is insufficiently precise and accurate to be granted an exemption. No rule change is needed to accomplish this.

In regard to proposed § 702.12(g), which would require a map of "appropriate" scale which clearly identifies the mining area, one commenter wanted OSM to specify a map scale not to exceed 1" = 400', since that scale was seen as the smallest scale that would allow the regulatory



authority to distinguish and evaluate industrial mining areas.

OSM has established a reasonable and clear standard of map scale, an "appropriate scale which clearly identifies the mining area" in final § 702.12(k). The regulatory authority can specify a scale if it finds it necessary to do so.

Another commenter suggested that the applicant be required to describe how the other minerals will be transported and processed.

Mineral processing activities are covered by final § 702.12(l). The regulatory authority may request additional information pursuant to final § 702.12(p) if circumstances warrant.

Several commenters recommended that the application should require existing operations to submit historical data on production of coal and other minerals for commercial use or sale. These commenters observed that tonnage reporting, in and of itself, does not ensure satisfaction of the requirement that such extraction be for commercial use or sale.

OSM disagrees. The purpose of the requirement in final § 702.12(o)(2) that the applicant submit past production tonnages is to obtain an accurate, objective record of past production upon which future production for commercial use or sale will be based for determining compliance with the exemption criteria. If the final rule were to require historical production for commercial use or sale, an element of subjectivity, and possibly ambiguity, would be injected into the past production figures. Furthermore, the applicant must separately establish the commercial value of the other minerals under final § 702.12(m). If the basis for all annual production projections required under final § 702.12(f) or the summary of sales commitments required under final § 701.12(m) do not establish the operation's eligibility for the exemption, the regulatory authority is free under final § 702.12(p) to request additional pertinent information.

#### *Section 702.13 Public Availability of Information*

Final § 702.13 is identical to the June 1, 1987 proposal, except for the changes discussed below. Final § 702.13 provides standards for the availability to the public of information submitted to the regulatory authority under this part.

Final § 702.13(a) states that except as provided in § 702.13(b), all information submitted to the regulatory authority under this part shall be made immediately available for public inspection and copying at the office of the regulatory authority having local jurisdiction over the mining operation

claiming the exemption until at least three years after expiration of the period during which the subject mining area is active. The word "immediately" has been added to ensure the timely availability of the application. A requirement has also been added that such application be kept available for a three-year period after an operation is no longer active. This recordkeeping requirement is consistent with section 517(f) of the Act. The exception to this provision, final § 702.13(b), allows the regulatory authority to keep information submitted to the regulatory authority under this part confidential if the person submitting it requests in writing, at the time of submission, that it be kept confidential and the information concerns trade secrets or is privileged commercial or financial information relating to the competitive rights of the persons intending to conduct operations under this part. Final paragraph (b) is changed from the June 1, 1987 proposal, which required the regulatory authority to keep information confidential if so requested. Under the final rule, the decision to keep information confidential is discretionary, not mandatory. Final § 702.13(c) states that information requested to be held as confidential under § 702.13(b) shall not be made publicly available until after notice and opportunity to be heard is afforded persons both seeking and opposing disclosure of the information. Determinations by OSM as to the proprietary nature of information will be made in accordance with the Freedom of Information Act (5 U.S.C. 552(b)), Privacy Act (5 U.S.C. 552(a)), and implementing regulations at 43 CFR part 2.

One commenter was concerned about obtaining access to exemption application information without having to go to the agency's central office and suggested that the application should be maintained both in the regional and central agency offices.

Section 702.13(a) provides that all information, except confidential information, shall be available for public inspection and copying at the local offices of the regulatory authority having jurisdiction over the mining operations claiming exemption.

One commenter argued that § 702.12, which specifies the contents of the application, is in conflict with former 30 CFR 786.15, subsequently codified in 30 CFR 773.13(d), which provides for public availability of information in a permit.

OSM disagrees with the comment. A permit application and an exemption application are two separate things. The public availability of permit information provisions at 30 CFR 773.13(d) apply to

permit applications, not to applications for exemption submitted pursuant to this part.

#### *Section 702.14 Requirements for Exemption*

Final § 702.14 establishes three basic criteria that must be satisfied in order for an operation to be determined to be exempt from the requirements of the Act and two other conditions necessary to obtain or maintain the exemption. Paragraph (a) implements the concept that the incidental mining exemption is based on a two-prong test, (1) that the extraction of coal does not exceed 16% percent of the mineral tonnage removed for commercial use or sale, the "tonnage" test, and (2) that the extraction of coal is incidental to the extraction of other minerals, as judged by the "stratigraphic" and "revenue" tests.

Final § 702.14(a)(1) specifies that the cumulative production of coal extracted from the mining area determined annually may not exceed 16% percent of the cumulative production of coal and other minerals removed for purposes of bona fide sale or reasonable commercial use, that is, for every 100 tons of total materials mined (coal and other minerals combined), up to 16% tons of that total may be coal.

Final § 702.14(a)(1) differs from the June 1, 1987 proposal. The final version of paragraph (a)(1) bases the tonnage test on "cumulative production . . . determined annually," whereas the original proposal would have measured "total tonnage" over the life of the mine. The annual determination of cumulative production will be based on the annual report submitted pursuant to final § 702.18.

In response to numerous concerns, OSM reconsidered the time period over which the exemption will be judged. Some commenters felt that the life-of-the-mine time frame was too long and requested OSM to consider a shorter period. In the February 24, 1988 proposal, OSM specifically requested comments on whether it should change the proposed standard, and if so, what period of time would be proper. In addition, commenters were asked to consider whether different time periods should be established for certain types of operations. As discussed below in the response to comments, OSM made this change due to its concern for potential abuse of the incidental mining exemption if the tonnage test were based on life-of-the-mine production with no intermediate compliance dates. By requiring that cumulative production be in compliance annually, OSM has



included intermediate stages for compliance.

Final § 702.14(a)(2) is unchanged from § 702.14(b) of the original proposal and requires coal to be produced from a geological stratum lying above or immediately below the deepest stratum from which other minerals are extracted for purposes of bona fide sale or reasonable commercial use. To satisfy this test, a person must demonstrate that each stratum of other minerals included in cumulative production is extracted for purposes of bona fide sale or reasonable commercial use in accordance with the market requirements of § 702.14(b). For example, if two strata of other minerals are identical, and the deeper stratum, which is immediately above a coal seam, is not needed to satisfy market requirements for that mineral, then removal of the deeper stratum would not be considered extraction for bona fide sale or reasonable commercial use. Similarly, if a larger number of acres of other minerals is removed than is needed for bona fide sale or reasonable commercial use, the standard would not be satisfied.

Final § 704.14(a)(3) is based on § 702.14(d) of the April 1988 proposal and provides that the cumulative revenue derived from the coal extracted from the mining area determined annually shall not exceed 50 percent of the total cumulative revenue derived from the coal and other minerals removed for purposes of bona fide sale or reasonable commercial use. Final paragraph (a)(3) further provides that if the coal extracted or the minerals removed are used by the operator or transferred to a related entity for use instead of being sold in a bona fide sale, then the fair market value of the coal used or other mineral used at the time of the use shall be considered rather than revenue.

The final rule bases the revenue test on "cumulative revenue \* \* \* determined annually," the same basis as the tonnage test. The April 1988 proposal would have measured "revenue \* \* \* over the life of the mining operation." This change was made in response to comments on the proposals and is discussed below. The basis for the annual determination of cumulative revenue will be the annual report submitted pursuant to final § 702.18 and any other available information.

Although other tests for determining whether the extraction of coal is incidental to that of other minerals were considered, the provisions selected achieve a balance between environmental concerns and concerns for the full utilization and conservation

of the coal. They will minimize the potential for future disturbance of the land to recover coal.

Final § 702.14(b) establishes two conditions with which persons seeking to obtain or who have obtained an incidental mining exemption must comply. Final § 702.14(b)(1) requires that each of the other minerals upon which an exemption under this part is claimed must be a commercially valuable mineral. This means that either a market presently exists or the mineral is mined in bona fide anticipation that a market will exist in the reasonably foreseeable future, not to exceed twelve months from the end of the current period for which cumulative production is calculated. Other minerals do not have to be sold in a marketplace to meet this standard if they are put to some reasonable commercial use within the structure of a single business entity. For example, a company may mine limestone and provide it to a subdivision of the company for use in construction activities. That limestone is considered a commercially valuable mineral even though it was transferred, rather than sold in the marketplace. Except for the phrase delineating the beginning of the 12-month period for market development, which was added in response to a comment discussed below, this portion of final paragraph (b) is identical to the original proposal.

At the time the original proposal was issued, OSM was concerned that the "bona fide anticipation" standard might provide an area of abuse because it might not be possible to project with precision the future marketability of any mineral. Thus, any expectation might qualify as a "bona fide anticipation." OSM considered adopting a rule that would only allow an exemption if a market exists for the commercial valuable other mineral at the time of the exemption application. Alternatively, if OSM were to allow future marketability to establish that the other mineral is commercially valuable, OSM considered requiring documentary evidence to establish the likelihood that a market for the other mineral will in fact develop during the next 12 months. OSM specifically requested comments on this issue. As discussed below in response to comments, OSM determined that a bona fide anticipation that a market will exist within a 12-month period is a standard that equitably balances the need to prevent abuse with the need to accommodate standard business practices.

Final paragraph § 702.14(b)(1) also provides that a legally binding agreement for the future sale of other minerals is sufficient to satisfy the

"commercially valuable mineral" standard of that paragraph. In response to comments, the legally binding agreement provision was added to the final rule by OSM to assist the regulatory authorities in determining when a "bona fide anticipation" exists. The operator must provide evidence documenting the claim to a future market.

Final § 702.14(b)(2) requires that if either coal or other minerals are transferred or sold by the operator to a related entity for its use or sale, the transaction must be made for legitimate business purposes. OSM added this provision in response to commenters' concern for potential abuse of the incidental mining exemption by operators who might transfer or sell quantities of coal or other minerals to other entities for the sole purpose of meeting the criteria of this section.

#### General Comments

A majority of commenters favored a two-pronged test to determine whether an operation is eligible for the exemption, i.e., an "incidental mining" test as well as a "tonnage" test. In regard to the incidental mining test, it was variously proposed that such a test should include a value or gross revenue test, an economic viability test, a geological incidental or stratigraphic test, or an acreage test that compares the acreage of coal removed to the acreage of other mineral removed for commercial purposes. One commenter stated that although the proposed rule paraphrased the statute, it modified the verbiage to the extent that, contrary to Congressional intent, a two-prong test had been created. This commenter maintains that Congress created a tonnage test which defined incidental production. Another commenter stated that "The basis of the incidental mining exemption should simply be that the primary mineral extracted is valuable and sold or commercially used, and that the amount of coal removed is small in relation to the amount of other mineral extracted."

After careful consideration, OSM has decided upon the exemption criteria and conditions contained in § 702.14 of the final rule. Those criteria implement a cumulative production tonnage test and an incidental mining test as demonstrated by the stratigraphic test and the cumulative revenue test. The conditions require a commercial market for other minerals and good faith in conducting transactions. Comments received on these requirements for exemption will be discussed below. For the reasons discussed earlier in this



preamble, OSM rejects the commenter's interpretation of the statute under which only tonnage need be considered to qualify for the exemption. (Even if the statute were capable of more than one construction, the rule would be supportable under sections 201(c)(2) and 412(a) of the Act as a reasonable interpretation and necessary to meet the purposes of the Act.) OSM also rejects the comment that OSM need only consider that the amount of coal removed is small in relation to the other minerals extracted. Such a scheme would violate the terms of section 701(28) of the Act, which specifies the acceptable ratio of coal to other minerals production (1:6).

#### Comments on section 702.14(a)(1)— Tonnage Test

Some commenters objected to the term "bona fide sale" as constituting a new criterion not found in the Act itself. Although they do not have a basic problem with this addition to the final regulation, they believe that the attempt to change the Act by regulation is improper, arbitrary and should not be allowed.

The use of the modifier "bona fide" with the term "sale" is merely an effort to clarify the term "sale" in order to avoid abuse through the elimination of bogus sales in the tonnage calculation. Each bogus sale would artificially inflate or misrepresent the total tonnage of other minerals. To avoid this result, OSM used the modifier "bona fide." This is reasonable, necessary, appropriate, consistent with Congressional intent and within the scope of the Secretary's authority pursuant to sections 201(c) and 412(a) of the Act. Further, this added phrase does not change the Act, but implements the statutory language, as is appropriate for a regulation.

A majority of commenters strongly urged OSM to require that an operation meet the criteria of the incidental mining exemption on an annual rather than life-of-mine basis. One commenter asserted that adoption of a life of the mine test would require regulatory authorities to rely on operators' unreliable, self-serving assertions of their future intentions. Several commenters stated that under a life-of-mine scenario, it would be impossible to take enforcement action against any operator until all mining activities had ceased. In the commenters' view, it would be relatively easy for an operator to mine coal for an indefinite period of time and claim that some time in the future he will mine enough other minerals to compensate for current or past non-complying percentages. During the period while the operator is making such

a claim, significant environmental and other abuses could be occurring and remain totally uncurbed. At a later date, the operator could easily disappear and leave the regulatory authority with no entity to hold accountable during enforcement actions. These commenters were therefore of the opinion that it would be reasonable to require an operation to meet the tonnage test during a 12-month period. They believed that if the test could not be met, then it would be reasonable to require the operator to obtain a surface coal mining permit.

In opposition to the above views were the comments received from two brick companies. These commenters stated that the 12-month period is inconsistent with the basic nature of the brick making process. A typical raw material pit would require approximately two years of preparation, i.e. removal of shale, limestone, coal and other material not usable for the brick making process, to serve as a contingency pit. This pit would often sit idle awaiting appropriate other raw materials for blending into the required brick material per a customer order. Total time from initial pit preparation to the yield of usable material per a customer order could be several years. In such a scenario, a typical pit could exceed the 16% coal tonnage limitation during a 12-month period. One of the commenters stated it would have two choices under the 12-month proviso: (1) Mine coal under a surface mining permit or (2) treat the coal as overburden never to be productively used. In the commenter's view, the latter choice would be the most likely outcome, although philosophically it is incorrect and both economically and environmentally it is unsound because "coal is a resource to be utilized not destroyed." As a solution to this quandary, the commenter suggested that the regulatory authority be provided latitude to review not only the quantity of coal and other minerals extracted during a year, but also the estimated future production of coal and minerals to be produced from that mining area along with the potential market for those minerals and coal and the operator's ability to satisfy that market. Such an approach is provided for by at least one State and, the commenter asserted, would allow an incidental coal operator to continue to exist and mine coal in an incidental fashion.

In response to these comments, OSM has not adopted the life-of-mine requirement and has included in its place a cumulative production test which must be met at the end of each

annual reporting period under final § 702.18. The commenters have convinced OSM that the life of the mine is too long a period over which to allow compliance and that the potential for abuse is significant. Moreover, if the operation were not in compliance at the end of the life of the mine, there is little remedial action that the regulatory authority could take since the mining process would have displaced much of the material needed to meet the performance standards of the Act. OSM believes a 12-month test under which the tonnage constraint must be met by the total production which occurred during any 12 months is similarly unreasonable because some large operations, such as brick companies, will not be able to comply on an annual basis due to the nature of their production methods. By instead requiring that all operations be in compliance cumulatively at the end of each annual reporting period, operators will count all production that occurred since mineral extraction began. They will not be penalized if in a particular 12-month period coal production exceeds 16% percent of total production as long as cumulatively they remain under that figure at the end of each reporting period. OSM believes that this test achieves a balance between unnecessary burden on the legitimate mining industry and the need to protect the public and the environment. The terms "cumulative production" and "cumulative revenue" are defined in final § 702.5 (b) and (c) and discussed in the preamble to that section. In addition, OSM has made provision for stockpiling in final § 702.18 so that operators entitled to the exemption may, if their industry practices necessitate, temporarily stockpile coal and other minerals. This should satisfy the brick manufacturers' concern for flexibility without jeopardizing the effectiveness of the rule to curb abuses. The provisions on stockpiling of other minerals are contained in § 702.16 and discussed in the preamble to that section.

#### Comments on section 701.14(a)(2)— Stratigraphic Test

A multitude of comments were received regarding this provision, in addition to proposed variations of the stratigraphic test. Several commenters suggested that coal production be allowed only above the deepest stratum of other minerals extracted for commercial use or sale. This was termed a "physical necessity" test, i.e., removal of only that coal which physically prevents an operator from reaching the sought stratum of other mineral.



Commenters argued for the physical necessity test based on the rationale that the extraction of coal is not incidental to the mining of other minerals if the decision to mine the stratum directly above the coal is based on the decision to mine the coal. These commenters cite the recent IBLA decision in *McNabb* as authority for this position. Other commenters also urged this position, and expanded upon it by suggesting inclusion of a requirement that the deepest stratum of other mineral be entirely removed for commercial use or sale. The commenters asserted that so doing would avoid the abuse of removing negligible quantities of the other mineral which underlies a coal seam, and subsequently claiming that the mineral bottom layer is the prime extraction goal. One commenter strongly urged elimination of the provision that would allow any coal production below the other mineral to be exempt because it could open the exemption to wide abuse. That commenter advocated adoption of the physical necessity test. Other commenters supported the proposal and favorably viewed coal extraction from the stratum below as both environmentally sound and in the interest of national energy conservation and utilization. One commenter suggested that coal production be allowed below, rather than the proposed standard of "immediately below," the deepest stratum from which other minerals are extracted. The basis for this suggestion arises in the context of eastern Ohio geology where multiple seams of coal, limestone and/or clay or shale are present. In the commenter's view, the use of an "immediately below" limit could potentially eliminate certain minerals or coal which would otherwise be extracted. Another commenter proposed that the rule be modified to allow coal to be extracted "adjacent to" as well as immediately below the deepest stratum of other mineral. Other commenters urged a rule which would allow production of other minerals as well as coal from the same pit regardless of the proximity of one to the other so long as the coal production does not exceed 16% percent of total tonnage removed.

OSM has reviewed the issue and decided not to change the proposed language. Although the physical necessity test may be easy to administer, precluding the exempt removal of coal immediately below the other minerals is not environmentally sound nor in the interest of conservation of the nation's natural resources. Coal should not be left as the last strata since

once it is exposed to air it can deteriorate and cause pollution. Coal can also be an aquifer which could result in groundwater contamination if disturbed but not removed. While OSM recognizes that the IBLA in *McNabb* discussed the physical necessity of removing the coal to reach the other mineral, the Board was interpreting the term "incidental" based on the facts and circumstances of the situation. The IBLA was not attempting to establish a general rule. By requiring that coal be produced from a geological stratum lying above or immediately below the deepest stratum from which other minerals are extracted for purposes of bona fide sale or reasonable commercial use, OSM believes that the coal may legitimately be characterized as "incidental" to the other mineral and thus satisfy Congressional intent if the other criteria are also met.

OSM did not require that the coal be "adjacent to" the other mineral, as one commenter suggested. Such a phrase is inconsistent with the geology of the coal fields where minor amounts of intervening strata typically separate coal and other minerals. OSM intends "immediately below" to mean that no substantial intervening strata exist between the lowest other mineral stratum and the coal seam. Since in certain areas, such as the Appalachian region, the strata are folded and faulted to the extent that bedding planes are not horizontal, OSM intends that the "immediately below" standard be interpreted that, given the direction of mining, the coal seam is reached closely following the latest stratum of other mineral. Given these variables, OSM intends to provide limited discretion to the regulatory authorities in determining whether coal lies "immediately below" other minerals.

OSM does not believe that it is necessary to require removal of the entire last seam of other mineral, as some commenters urged, as long as a substantial amount of the other mineral overlying the coal is actually removed for purposes of bona fide sale or reasonable commercial use. This latter condition will satisfy the Act's intent. Because of the requirement that the other mineral be removed for purposes of bona fide sale or reasonable commercial use, where two seams of more-or-less identical other mineral are present, with coal immediately below the second, mining of the second seam to reach the coal will not qualify for the exemption if the quantity of the other mineral in the first seam is sufficient to meet the needs of the operator.

As for those comments that urge that the coal production be allowed below, or regardless of proximity, rather than immediately below the deepest stratum of other minerals, OSM believes that allowing operations to qualify for the exemption regardless of the thickness of the intervening strata would lead to non-"incidental" operations qualifying for the exemption and abuse would occur.

#### Comments on section 702.14(a)(3)—Revenue Test

Many comments were received urging OSM to adopt a revenue test. Some commenters asserted a revenue test is necessary to prevent the other mineral from being "dumped on the market below cost in order to extract and market coal without complying with the tax (i.e., reclamation fee) and environmental constraints of a permitted surface coal mining operation." The commenters believed a revenue test is needed to prevent "unfair competition" and to establish a "level playing field." Other commenters believed that a revenue test is necessary because it defines the primary objectives of any business venture. For these commenters, the "units in which private business measures importance are dollars" and so "no operator can claim to be incidentally extracting coal where his revenues exceed revenues from other minerals." A commenter further stated that his company's financial statements "like everyone else's, are computed in dollars and cents, not tons of material, because money is the bottom line reality of the private sector." The commenter believed that "every operator in the United States can determine from a glance at his tax returns whether he has generated more gross revenue from coal than from limestone." The commenter contended that a "gross revenues test would impose absolutely no reporting burden and could be enforced through the simple expedient of requiring operators who seek the exemption to file an annual sworn statement that their gross revenues from other minerals exceeded their gross revenues from coal." Other commenters stated their belief that a revenue test is "common sense" and do not "see how it is possible to believe that an operator who makes most of his income from coal mining is only incidentally mining that coal." Some commenters believed that a "50 percent standard may be too high," and request the OSM consider a lower threshold for situations where coal revenues as compared to other mineral revenues would make the operation non-exempt.



One commenter argued for "flexibility" for smaller operations in applying the rule. Another commenter argued against any less stringent requirements for small operators because "Congress did not intend to exempt small coal operators from compliance with the Act."

Some commenters opposed a revenue test. A State regulatory authority argued that it is "not equipped with the staff or resources to review and accept or reject documentation of revenue, bona fide sales, or fair market value." The commenter indicated that based on 1986 production and sales figures compiled by the agency an operator would have to produce 21.3 tons of shale, 5.1 tons of clay, or 7.8 tons of limestone for each ton of coal produced to earn equal revenues for the other mineral and coal. The commenter asserted that if a revenue test is adopted, market decline in any noncoal minerals coupled with an improved coal market during the course of a mining operation could unfairly penalize an operator whose initial operation was clearly exempt. The commenter believed that a fifty percent revenue test applied to currently exempt operations in some States would result in the loss of the exemption for several operations. One commenter contended that an economic test would ignore the decisions in several cases decided on the exemption. One commenter believed that the problem is "not [one of] coming up with more complicated formulas, but of enforcement." The commenter recommended that the Federal and State regulatory agencies "work closer together to do more audits to determine whether or not there is compliance with the current standards." The commenter urged "strict enforcement and follow-up and monitoring industrial mineral operations."

OSM has carefully reviewed the comments received concerning the viability of a revenue test for determining the initial or ongoing qualifications of an operation for an incidental mining exemption and has decided to adopt the final rule as proposed in April 1988 with a change to reflect that cumulative revenue will be determined annually. The proposal stated that revenue would be measured over the life of the mining operation. This change parallels the one made to the tonnage test to make the compliance and measurement methodologies consistent. Evaluation of cumulative production (and revenue) on an annual basis, instead of a life-of-mine basis, was adopted in response to comments. See the preamble discussion of the tonnage test above.

A comparison of coal-derived revenue to total gross revenue is a simple and straightforward tool for determining the primary purpose of an operation. The revenue test, in tandem with the stratigraphic test, gives the regulatory authority an objective way to determine whether coal extraction is incidental to other mining activities. As the commenters pointed out, revenue is the "bottom line" and defines the primary objective of a business venture. No evaluation of the purpose of a commercial activity would be complete without an examination of the revenue it generates. Although some commenters felt that the proposed 50 percent revenue threshold would be too high, OSM adopted the 50 percent standard in the final rule because it believes that taken together with the tonnage and stratigraphic tests, the 50-percent threshold will adequately prevent abuses. OSM is willing to re-examine this issue in the future, if it can be demonstrated that the 50 percent revenue threshold is not effectively preventing abuse of the exemption. Concerning small operations, OSM did not provide any less stringent requirements because there is no authority under the Act to do so.

In regard to the concern about adequate staff and resources to implement the revenue test, OSM believes that there will be relatively few mining areas applying for and obtaining the exemption, requiring a relatively small increment of staff and resources. Subject to appropriations, funds are available in the form of 50:50 matching grants for program administration costs. Regulatory authorities are not prohibited by this final rule from offsetting some of their costs by charging fees for exemption application reviews.

Concerning the uncertainty of maintaining the exemption in view of the possible fluctuations in the market values of coal and other minerals, OSM believes that the final rule contains sufficient flexibility to allow legitimately exempt operations a reasonable amount of certainty of maintaining the exemption. Both the 50 percent revenue threshold and the stockpiling provisions of final § 702.16 provide flexibility.

#### Comments on Section 702.14(b)(1)—Other Mineral Commercial Market Determination

Final § 702.14(b)(1) requires that each of the other minerals upon which an exemption under part 702 is based is a commercially valuable mineral for which a market exists or which is mined in bona fide anticipation that a market will exist for the mineral in the reasonably foreseeable future, not to

exceed 12 months. This was included in the June 1987 proposal as proposed § 702.14(c). In response to a comment, OSM has clarified that the 12-month period in which a market must be developed begins after the annual reporting period during the stockpiled material was extracted. OSM has added a statement in the final rule that a legally binding agreement for the future sale of other minerals is sufficient to demonstrate the above standard.

Numerous comments were received on the proposed rule. Some commenters objected to the provision that allows an applicant to mine "in bona fide anticipation that a market will exist" because they believe the provision opens "an unenforceable loophole." For these commenters, if there is no current market, then the removal is not for commercial use or sale, but rather in anticipation of a future sale or use. Other commenters believed that specific and detailed documentary evidence should be provided to verify that a market actually exists for the mineral, as well as to establish the likelihood of the development of a market in the reasonably foreseeable future. Other commenters asserted that the provision will be difficult to administer, burdensome on applicants and too subjective. The commenters further contended that in "previous regulations, i.e., oil and gas product value rules, the [DOI] has argued that the elimination of such subjective regulatory requirements is a major objective." The commenters argued that by basing the exemption on what is sold or used from the mine each year, the "potential problems associated with determining whether noncoal minerals are commercially valuable can be avoided." Some commenters believed that no allowance should be made for future markets regardless of documentation that could be developed to support such a projection. For these commenters, such documentation is a "mere prediction of commercial value and does not reflect current commercial value as required by the plain language of section 701 of the Act." They asserted that given the strong incentive to gain a competitive advantage over coal producers who "are required to comply with the full panoply of standards of the Act, the likelihood of paper trails of anticipated markets being concocted is great." One commenter suggested language that would require the applicant to establish that the other minerals can be "extracted, removed and marketed at a profit even in the absence of the extraction and sale of incidental coal production." One commenter remarked that the bona fide



anticipation of a future market provision is reasonable and effective for operators who have been in the other minerals business for a period of years because there is a basis upon which to make an evaluation of the nature of the business. The problem, according to the commenter, is with new operations that are "under ten acres and all mining would be done in much less than 12 months." The solution for the commenter is for OSM to adopt the "primary purpose test enunciated in the Cordova Clay case." The result would be to require an operator "to prove from the beginning of the operation that there is a legitimate intention to be in some business other than mining coal." The commenter urges that OSM "make clear that an operator is not given a free 12 months" and that "an evaluation of the primary purpose of the operations may be made at any time taking into consideration the totality of the circumstances of each operation."

Other commenters argued that "the bona fide anticipation that a market will exist for the mineral in the reasonably foreseeable future, not to exceed 12 months" is too stringent because 12 months is "arbitrary to the standpoint that it does not give a reasonable period of time to determine if it is a commercially valuable or commercially marketable mineral." Another commenter contended that the 12-month limitation "gives no reality to the depressed markets that might affect the minerals mined." The commenter also believed that the provision is unclear and asks the following questions: does it mean that a market must exist and all of the minerals must be sold within a period of 12 months; and, does the 12 months begin to run on the completion of the application for exemption, at the beginning of the mining, or at some other point? The commenter further argued that the provision gives "no benefit to the miner who is spending his money in mining since he would venture to undertake a mining operation which may suffer economic setbacks because of a turn down in the housing market which easily affects the markets for the sale of clay or similar problems." The commenter further asserted that the proposed rule "seems to be attempting to dismantle the decision reached by Judge David Torbett in the case involving Cordova Clay Company." Another commenter indicated that the 12 months provision is "unworkable" because "our raw materials are so changeable and our blending so complex, to obtain desired color, texture, and size control, that testing and classification of these raw materials

cannot occur until they are exposed and [it is] only then that we develop a plan for when, where, and how much a specific raw material from a specific location can be utilized." Another commenter asserted that an operator should be required to prove marketability of the other mineral. The commenter agreed that it should be required that the market exists within the reasonably foreseeable future, but it is "not important that it exists within a specified time period, i.e., not to exceed 12 months." The commenter believed that it is more important that the operation of the company "be conducted in a reasonable commercial fashion." The commenter gave an example: "An operator can show that after mining clay, it is required that the clay weather for six months before it is commercially marketable." The commenter believed that the "commercial reasonableness" of the operation should be a prime consideration in determining the applicability of the exemption and the company must be able to show that it is operating in a "reasonable commercial manner in light of accepted industry practices."

OSM has considered the above comments and has decided to promulgate the language as proposed with some additional language to provide guidance to the regulatory authority. A great variety and diversity of other minerals and materials are being mined by operators who extract coal and come under the provisions of these rules. Moreover, markets change and technology finds new uses for minerals and materials. For these reasons, it would not be good public policy to prohibit other mineral mining in anticipation of a future market. OSM recognizes, however, that the provision can be abused and has attempted to give the regulatory authority the ability to reject spurious claims to a future market by requiring that mining must be in "bona fide anticipation that a market will exist." By retaining a 12-month provision in the final rule, a reasonable standard is established by which the regulatory authority can judge the claim to future market. To further aid the regulatory authority OSM has added a sentence at the end of the provision to read: "A legally binding agreement for the future sale of other minerals is sufficient to demonstrate the above standard." OSM's intent in adding this language is to ensure that the claim to a future market must be demonstrated by the operator by some evidence that the market will exist in the future.

OSM does not agree that, as one commenter contended, the provision is

"difficult to administer, burdensome on applicants and too subjective." By providing a specific standard as to what constitutes sufficient documentation of the existence of a commercial market, the provision is simple and objective. OSM does not believe it is burdensome for applicants and existing operations to supply documentation of sales commitments since this is a routine type of documentation. OSM agrees that the elimination of subjective regulatory requirements is a DOI goal. For instance, OSM rejects the suggested standard that a company need only operate in a reasonable commercial manner in light of accepted industry practices because that is a subjective standard that in practice would be subject to abuse. OSM does not believe, however, that the provision as adopted and explained is overly subjective.

OSM does not agree that, as one commenter contended, the "plain language of section 701 of the Act requires current commercial value for the other minerals" because there is no indication in either the language or the legislative history that Congress intended to reject application of the exemption to other minerals having a commercial value in the near future. Absent any specific guidance in the legislative history of the Act, OSM believes it is reasonable to consider a mineral as being commercially valuable if a market will develop in the 12 months immediately following the annual reporting period during which the mineral was extracted. The Act does not use the phrase "commercially valuable," but instead refers to minerals "removed for purposes of commercial use or sale," without expressly stating when such use or sale must occur. OSM's final rule is a reasonable interpretation of the statutory language in the absence of any specific guidance in the legislative history.

As for the commenter who says he knows of operators with ten-acre mines who would complete their mining in less than 12 months, OSM's response is that the regulatory authority can require those operators to demonstrate their future market and reject the applications of those operators who cannot so demonstrate.

As for those commenters who contended that 12 months is not sufficient time in which to allow a future market to develop, OSM believes a 12-month period from the end of the annual reporting period during which the mineral was extracted is a reasonable accommodation between the need to establish a time limitation to prevent



abuse and the need to establish a valid business commitment.

In response to the commenter who was concerned about when the 12 months begins to run and if a market must exist and all of the mineral must be sold within the 12-month period, the 12-month period begins to run from the end of the annual reporting period during which the mineral was extracted. This is specified in final § 702.14(b)(1) to avoid confusion and to ensure consistency as to when the period should run. For example, for minerals that were extracted during an annual reporting period that extends from April 1, 1990 through March 31, 1991, the stockpiled minerals must be sold by March 31, 1992, regardless of whether they were extracted in April 1990 or March 1991. An approval based upon individual accounting for the date of each ton of other mineral removed would impose an unreasonable administrative burden.

The requirement will be satisfied if the operator will either sell or, during that period, enter into a legally binding agreement to sell the other mineral. OSM believes that this provision is flexible enough to allow the operator to adjust to market changes. It should be noted that since cumulative production is calculated annually under this final rule, a ton of other mineral removed shortly after the end of a reporting period (or in the absence of a reporting requirement, shortly after the end of a period for measuring cumulative production) is not subject to the requirement to be sold or have a legally binding agreement to be sold until 12 months after the end of the current period for measuring cumulative production. This period of time could exceed one year from removal, but will not exceed two years. Although one commenter opposed allowing any "free" time for the development of markets, this provision is needed to make the rule work.

As for the comment that the proposed rule "seems to be attempting to dismantle the decision reached by Judge David Torbett in the case involving Cordova Clay Company," the commenter is apparently referring to *Cordova Clay Co. v. OSMRE*, NX5-3-R (January 2, 1986), an administrative hearing before the DOI. In this case the administrative law judge (ALJ) stated that "Congress meant the obvious, that is, the term 'incidental' means that the coal removed must not exceed 16% percent of the tonnage of the materials removed for the purposes of commercial use or sale." In the absence of a rule, the ALJ applied a two-part test, stating that "[t]he applicant in this particular case

must first prove \* \* \* that it was primarily seeking clay and, secondly, that no more than 16% percent of the material removed for commercial purposes was coal." In seeking to determine what was the operator's primary intention, the ALJ relied on a variety of factors, including the length of time the operator had been in business, his credibility as a witness, and his ability to sell all the clay he removed from the ground. The ALJ discounted the importance of the location of the coal in relation to the clay, stating "[t]he fact that the applicant mines perhaps to greater depth to reach fire clay because of the availability of certain coal which helps to pay expenses does not take the applicant out of primarily being in the business of mining clay." OSM's opinion is that the ALJ was correct in perceiving that the Act requires a two-part test for the incidental mining exemption. However, the ALJ's application of a "primary intention" test in this case points out the benefits of establishing objective criteria. In the *Cordova* case, the ALJ relied on peripheral issues, such as the operator's longevity and credibility as a witness, instead of the fact that the operator mined through relatively worthless rock and clay to reach marketable coal. OSM believes that the rule adopted today will allow for clear and consistent application of the incidental mining exemption and will lessen reliance on subjective factors.

OSM's response to the comment that asserts that the other mineral mined cannot be utilized until it has been exposed and a plan developed to use it is that the 12-month limit should pose no problem as long as the operator has a legally binding agreement to sell the other mineral or its product. OSM agrees with the commenter that the operation "be conducted in a reasonable commercial standard" but that the 12-month requirement is necessary to ensure that the exemption is not subject to abuse. OSM agrees that the regulatory authority cannot be arbitrary in applying the rule and must consider, as the commenter urges, whether the operation is conducted in a "reasonable commercial manner in light of accepted industry practices," but does not agree that such a standard itself is sufficient to prevent abuse. Despite the rejection of these comments, OSM is willing to consider in the context of a specific proposed State program amendment whether the State can demonstrate for specific industries in that State an identifiable time period needed for market development that is no less effective than final § 702.14(b)(1) in

recognizing accepted industry practices and preventing abuse of the exemption.

#### Comments on the Proposed Economic Viability Test

OSM also solicited comments on an "economic viability" test. Several commenters advocated the test, referring to it by various names, such as the "independent viability" test and the "but for" test. The commenters used the terms synonymously. While some commenters preferred this test as an alternative to a revenue test, most commenters who favored adoption of some kind of financial test urged its adoption in addition to the revenue test in order to "avoid the manipulation of revenues in order to achieve exempt status." The test posits that if the other mineral operation would not have "independent viability but for the additional revenues projected from coal removal and sale, the activity is not a legitimate other mineral operation since coal removal is a primary purpose rather than an incidental aspect of the other mineral operation." The commenters indicated that the regulatory authority must have certain basic information in order to make an informed judgment regarding the independent viability of proposed exempt operations. In the commenters' opinion, the applicant must provide estimates of tonnages of other mineral and coal to be removed, and identify the sources of such estimates, including core sampling or other subsurface exploration records. The regulatory authority must also have access to documentation from the applicant establishing the existence of a current market of national, regional or state scope for the other mineral and the range of market values for the mineral. Based on the information provided in the application, other data available to the agency on market values for bona fide coal and other mineral sales, and the tonnages of the coal and other mineral, the regulatory authority must find that the "other mineral" operation would have independent economic viability as a profitable enterprise independent of the coal extraction. The commenters believed that the revenue test alone is an "insufficient protection against abuse of the exemption." The combination of the revenue test and the economic viability test would assess whether the operation would be commercially viable absent projected coal removal and thereby, according to the commenters "lessen potential for abuse and conform to the legislative intent that the exemption apply to cases where coal is found but is not the mineral being sought." One commenter



indicated that the economic viability standard was enunciated by the Interior Board of Land Appeals in *McNabb*. The commenter contended that since the Board is the "voice of the Secretary of the Interior, and is authorized to determine as fully and finally as might the Secretary, all matters within the jurisdiction of the Department of the Interior (see 43 CFR 4.1), the adoption of an economic viability regulation amounts to nothing more than the ministerial codification of a standard which the Secretary has already determined to be required by the Congress through the enactment of SMCRA." The commenter argued that the adoption "of any standard less stringent than the economic viability standard would thus be unlawful since OSM has no discretion to allow surface coal mining operations (as defined at section 701(28) of (the Act) to proceed outside (the Act's) regulatory framework (see section 521(a) of (the Act))."

OSM does not believe that an economic viability test in place of or in addition to the revenue test is either needed or desirable. Moreover, the economic viability test proposed by the commenters would be very difficult for the regulatory authority to administer. The test is not needed because the other requirements of this section are sufficient to define "incidental" and to allow the regulatory authority to evaluate all claims to the exemption. In addition, OSM does not believe that it is appropriate that the regulatory authority have to analyze complicated economic factors and make a finding that the "other mineral operation would have independent economic viability as a profitable enterprise independent of the coal extraction." The test is too stringent and impractical to be used as a standard to determine what operations can claim the exemption. And, as discussed earlier in this preamble, an economic viability test is not required by the Act.

OSM does not agree that the Interior Board of Land Appeal's decision in *McNabb* has the effect suggested by the commenters. In the absence of a rule, the Board was interpreting the facts and circumstances of the case in light of the 1984 incidental mining exemption guidelines, which recommended consideration of a variety of factors in determining if the extraction of coal is "incidental" to the extraction of other minerals. The Board resolved a particular controversy in *McNabb*. The Board's decision in that case does not limit the Secretary's authority subsequently to promulgate new rules in accordance with rulemaking requirements that interpret or implement

the Act. To hold otherwise would bind other members of the public to the results of a decision in which they had no opportunity to participate.

#### Other Comments

Several miscellaneous or general comments were received on proposed § 702.14. One commenter recommended a "threshold" test. The commenter indicates that a provision could be included which establishes a "coal production or value threshold above which the exemption would not be granted." The commenter gave the example that "if the information in the exemption application discloses that over the life of the mine more than 1/3 of the time (a 1/3 production threshold) annual coal production exceeds the 16% percent limit, the exemption would not apply and the mine would be considered to (fall under the jurisdiction of the Act)." The commenter indicated that the 1/3 annual threshold test would also apply to coal value, i.e., in order to obtain an exemption the value of annual coal production could not exceed the value of noncoal production more than 1/3 of the time over the life of the mine. The commenter concluded that "conformance would be easily measured by comparing the annual report data with the information provided in the application."

OSM did not accept this comment. The commenter's suggestion was a means of increasing the enforceability of the life-of-mine tonnage test and a financial test. As discussed earlier in this preamble, OSM decided not to adopt the life of the mine as a time frame for applying the incidental mining exemption criteria. The commenter's suggestion is too complex to be workable. Like the June 1987 proposal, the regulatory authority would have to wait until the life of the mine were over to determine if the mine should have been considered exempt under the 1/3 of the life test.

Two commenters urged OSM to allow the regulatory authority the flexibility to grant specific time extensions to an operator if more time is needed to meet the 16% ratio. One commenter submitted the language of a State regulation that provides the criteria used in deciding whether to grant time extensions.

OSM did not accept this comment. The issue raised is the time frame within which an operator must comply with tonnage requirements. Sufficient flexibility is provided by the cumulative production test and the stockpiling provisions of final § 702.16. Under the cumulative production test, the operator's cumulative coal production

must not exceed allowable limits at the end of the annual reporting period. During the period itself slight overages may occur as long as the operator can come into compliance with tonnage requirements at the end of the annual period, and in fact does so. Responsible operators should be able to comply, and no purpose is served by allowing extensions.

One commenter argued that it should be "administratively permissible to switch over to a coal permit for the duration of the coal removal and then switch back to an incidental coal permit for final reclamation—or at least waive the original contour concept."

OSM cannot waive the approximate original contour or any other standard mandated by the Act. OSM believes that the commenter's suggestion of allowing an operator to switch from incidental exemption to regulated surface coal mine to incidental exemption would not only violate the purposes of the Act, but would also cause an inordinate administrative burden on the regulatory authority.

#### Section 702.15 Conditions of Exemption and Right of Inspection and Entry

Final § 702.15 imposes certain conditions on exempted operations, including the right of entry and inspection.

Final § 702.15(a), which is virtually identical to § 702.15(a)(1) in the original proposal, requires a person conducting activities covered by part 702 to maintain on-site or at other locations available to authorized representatives of the regulatory authority and the Secretary information necessary to verify the exemption including, but not limited to, commercial use and sales information, extraction tonnages, and a copy of the exemption application and exemption approved by the regulatory authority. The final rule differs from the original proposal in that the final rule in two places reflects the change in procedure from the notice of exemption process to the application for exemption process. Pursuant to that changed procedure, the final rule indicates that information "necessary to verify the exemption" be maintained on-site, in contrast to the proposed language which stated that information "relevant to the exemption" be maintained on-site. Secondly, the final rule requires a copy of the "exemption application and exemption approved by the regulatory authority" be maintained on-site, while the proposal only required "a copy of the notice of exemption."



Final § 702.15(b) requires a person conducting activities covered by this part to notify the regulatory authority upon the completion of the mining operation or permanent cessation of all coal extraction activities. The original proposal only required notification of the regulatory authority upon completion of the mining operation. The requirement for notification of the regulatory authority at the permanent cessation of all coal extraction activities was added to the final rule in recognition of the fact that all coal extraction may cease before completion of the mining operation. If so, the regulatory authority should be notified since the exemption ceases to have any relevance when coal will no longer be mined at the site.

Final § 702.15(c) requires a person to conduct operations in accordance with the approved exemption application. Also, if an operator is authorized under final § 702.11(b) to extract coal prior to submittal or approval of its application for exemption, either because pursuant to final § 702.11(b), it filed an application within 60 days after the effective date of this final rule or because under § 702.11(e)(3), the regulatory authority does not act within 90 days of receipt of an administratively complete application, the operator must conduct operations in accordance with the exemption criteria of part 702 or counterpart provisions of the State regulatory program. This provision is similar to the language at § 702.15(a)(3) of the February 24, 1988 modified proposal, but the good faith standard that was contained in the proposal has not been included in the final rule in response to comments as discussed below.

In the February 24, 1988 notice, OSM included a good faith standard in proposed §§ 702.15 and 702.17. The purpose of the provision in proposed § 702.17 would have been to continue an existing policy whereby a person who received an exemption from the regulatory authority could rely upon the exemption. Under proposed § 702.17, as long as a person was operating in good faith and attempting to comply with the terms of the exemption, the person would not be subject to direct enforcement action under the Act until revocation of the exemption. The good faith standard was included in proposed § 702.17 to prevent persons with an approved exemption from intentionally violating the law without being subject to enforcement under the Act. Section 702.15(a)(3) was proposed as a companion section to § 702.17 to require good faith operation in accordance with

the approved application. However, in response to comments pointing out that a good faith standard is difficult to prove, unnecessary and subjective, OSM has not included the standard in the final rule.

Final § 702.15(d) is identical to § 702.15(b) of the original proposal and provides that authorized representatives of the regulatory authority and the Secretary shall have the right to conduct inspections of operations claiming exemption under part 702.

Final § 702.15(e), which is identical to § 702.15(c) of the original proposal, identifies the specific inspection rights of authorized representatives of the regulatory authority and the Secretary. Final paragraph (e)(1) provides that authorized representatives of the regulatory authority and the Secretary shall have a right of entry to, upon, and through any mining and reclamation operations without advance notice or a search warrant, upon presentation of appropriate credentials. Final paragraph (e)(2) states that the authorized representatives of the regulatory authority and the Secretary may, at reasonable times and without delay, have access to and copy any records relevant to the exemption. Finally, paragraph (e)(3) of the final rule specifies that the authorized representatives of the regulatory authority and the Secretary shall have a right to gather physical and photographic evidence to document conditions, practices or violations at a site.

Final § 702.15(f), which is identical to § 702.15(d) of the original proposal, states that no search warrant shall be required with respect to any activity under paragraphs (d) and (e) of this section, except that a search warrant may be required for entry into a building.

Several commenters urged the elimination of the good faith standard of proposed § 702.15(a)(3) of the February 24, 1988 proposal because it is "overly subjective and difficult to prove." Other commenters suggested that good faith is only appropriate in the computation of discretionary civil penalties and not in enforcement actions. The commenters urged that a "strict liability" standard be adopted.

As mentioned above, OSM agrees with the commenters and has not included the good faith standard in § 702.15 or § 702.17 of the final rule.

A commenter objected to the "broad discretion" given to the regulatory authority to review an operator's records. The commenter suggested that the regulatory authority's record search

be limited to only those records relevant to the claim for exemption under consideration.

OSM recognizes the merit of the comment. The regulatory authority must have access to all information relevant to the exemption including commercial use and sales information and tonnages of all minerals extracted. OSM believes that final § 702.15 provides the regulatory authority with the right of access only to records relevant to the exemption.

#### *Section 702.16 Stockpiling of Minerals*

Final § 702.16 establishes the conditions under which a mining area's tonnage figures of stockpiled coal and other minerals may be used for the purposes of qualifying, initially and annually thereafter, for the incidental mining exemption. This section was not affected by the February 24 and April 25, 1988 modifications to the original proposed rule.

Final § 702.16(a) addresses stockpiling of coal and provides that coal extracted and stockpiled may be excluded from the calculation of cumulative production until the time of its sale, transfer to a related entity or use within the limits specified in paragraphs (a) (1) and (2). Under final paragraph (a)(1), for mining areas that have been extracting coal for at least the two preceding years, coal may be stockpiled and excluded from the cumulative production figures up to an amount equaling a 12-month supply based on the average annual sales, transfer or use from the mining area over the preceding two years. Final paragraph (a)(2) applies to mining areas that have not yet established the two-year track record and provides that an amount of coal that would represent a 12-month supply based on average monthly sales, transfer or use may be stockpiled and excluded from the cumulative production figures. For example, after one year of coal production from a mining area, the operator would be able to stockpile and exclude from cumulative production figures an amount equal to the amount of coal sold, transferred or used during the year of production.

The provisions of final § 702.16(a) were added in response to comments to draw a reasonable standard and to make the final rule more flexible. An example will illustrate why a degree of flexibility is necessary. If a legitimate "other minerals" operator opens a pit where the upper strata contain coal, which must be mined out in order to reach extensive beds of other minerals below, the operator would be penalized by virtue of the fact that in the early



stages of the operation the bulk of production would be coal. This provision allows such an operator to stockpile the coal for a reasonable, but not unlimited, time without including it in the cumulative production totals until the production of other minerals for purposes of bona fide sale or reasonable commercial use reaches a level that would allow the mining area to satisfy the tonnage test.

Final § 702.16(b) addresses stockpiling of other minerals. With the exception of the change described below and a few editorial changes, final § 702.16(b)(1) is the same as § 702.16 of the June 1, 1987 original proposal. Final paragraph (b)(1) provides that the regulatory authority shall disallow all or part of an operator's tonnages of stockpiled other minerals for purposes of meeting the requirements of part 702 if the operator fails to maintain adequate and verifiable records of the mining area of origin, the disposition of stockpiles or if the disposition of the stockpiles indicates the lack of commercial use or market for the minerals. The final rule gives flexibility to the regulatory authority concerning stockpiling of other minerals and is intended to ensure that only verified tonnages of stockpiled other minerals and only stockpiled other minerals for which a commercial use or market exists are included in the calculation of production rations. The word "may" in the proposal was changed to "shall" in the final rule to require disallowance of unverified tonnages. The requirement for maintaining records of the mining area of origin was added because the exemption must be determined for each mining area. This does not require physical segregation of stockpiled other minerals as long as adequate records are maintained.

Final § 702.16(b) (2), (3) and (4) were added to the final rule by OSM in response to comments concerned with the potential for abuse of the incidental mining exemption through manipulation of its stockpiling provisions. Final § 702.16(b)(2) provides that the regulatory authority may only allow an operator to utilize tonnages of stockpiled minerals for purposes of meeting the requirements of part 702 if (i) the stockpiling is necessary to meet market conditions or is consistent with generally accepted industry practices; and (ii) the stockpiled minerals do not exceed a 12-month supply of the mineral required for future sales as approved by the regulatory authority on the basis of the exemption application. Final § 702.16(b)(3) states that the regulatory authority may allow an operator to

utilize tonnages of stockpiled minerals beyond the 12-month limit established in paragraph (b)(2) if the operator can demonstrate to the regulatory authority's satisfaction that the additional tonnage is required to meet future business obligations of the operator, such as may be demonstrated by a legally binding agreement for future delivery of the minerals. Final § 702.16(b)(4) allows the regulatory authority to revise the stockpile tonnage limits periodically in accordance with the criteria established by § 702.15(b)(2) and (b)(3) based on additional information available to the regulatory authority.

Numerous comments were received on stockpiling. Some commenters wanted a total prohibition on allowing any stockpiled material to be used in calculating the requirements of the exemption. For these commenters, "operators illegally using the exemption could mine the overburden until either tonnage or gross revenues from the stockpiles of other minerals are high enough, then become a surface coal mining operation for an extended period of time following removal of the other mineral." In the commenters' view, stockpiling would thus allow these operators to avoid the standards of the Act. Other commenters advocated prohibiting stockpiling for a period in excess of that needed to load and transport the minerals for end use or processing. For these commenters, the existence of a stockpile beyond that period of time needed to transport or process the minerals is a "good indicia of the lack of commercial value and/or decline of the marketplace, both of which should trigger further agency inquiry."

In contrast, other commenters opposed any restrictions on stockpiling. For these commenters, any restrictions on stockpiling violate the "rights of operators." Some commenters believed that restrictions on stockpiling are unnecessary because the annual reporting requirements of the rule protect against operations falsely claiming the exemption by selling coal while indefinitely stockpiling or spoiling the other minerals. One commenter believed the rule "totally ignores the condition of the market and gives too much discretion to the enforcement efforts of OSM." Other commenter requested guidelines or indication as to what are the "adequate and verifiable records of the disposition of stockpiles" required to be maintained by the operator pursuant to proposed § 702.16. Another commenter indicated that stockpiling should be allowed only to

the extent that it is a "general custom of the industry and only for a limited period of time." This commenter further contended that if stockpiling is not controlled, "a coal operator may remove the unwanted other mineral in order to justify the coal removal without a permit and without bond, only to leave the stockpiled unwanted other mineral once the coal is removed." The result would be "the coal would have been extracted without a permit and the land would be left entirely uncovered by bond." Some commenters believed that, over an annual period, "seasonal stockpiling and subsequent sales will be balanced to address the concerns of entities that legitimately operate under the incidental mining exemption." The commenters "strongly oppose the inclusion of stockpiles in an exemption test made at the end of each year." Another commenter believed that the issue of stockpiling cannot be solved in a rulemaking that is "national in scope." The commenter agreed that some limits are necessary to prevent an operator from using a stockpile that is "actually only a spoil pile that the operator is attempting to use to establish his exemption and thus not to meet Federal and State coal strip mine requirements." The commenter recommended that the solution to the stockpile issue is "best left to the individual States."

OSM, while recognizing the difficulty of the stockpiling issue, believes it is important to ensure that stockpiling is not abused. Therefore, in final § 702.16(a), OSM limited the amount of coal that may be stockpiled without including it in cumulative production. OSM also added to the final rule provisions governing the conditions under which stockpiled other mineral tonnages will be accepted by the regulatory authority. Final § 702.16(b)(2) was added to provide that the regulatory authority may only allow an operator to utilize tonnages of stockpiled minerals if the stockpiling is necessary to meet market conditions or is consistent with generally accepted industry standards and the stockpiled minerals do not exceed a 12 month supply of the mineral required for future sales as approved by the regulatory authority on the basis of the exemption application. Since the exemption application contains estimates of other minerals sales and revenues, it is the appropriate document to rely on for justification of other mineral stockpiling. Final paragraph (b)(3) was added to give the regulatory authority discretion to allow an operator to utilize tonnage figures of stockpiled minerals beyond the 12 month limit established in



paragraph (b)(2) if the operator can show to the regulatory authority's satisfaction that the additional tonnage is required to meet future business obligations of the operator such as may be demonstrated by a legally binding agreement for future delivery of the minerals. Final paragraph (b)(4) was added to give the regulatory authority the discretion to periodically revise the stockpile tonnage limits based on additional information available to the regulatory authority. OSM believes these additional provisions provide a clear and reasonable standard that is flexible enough to address effectively a variety of mining circumstances.

A total prohibition on stockpiling or a prohibition for a period in excess of that needed to load or transport, as some commenters urged, is not reasonable given the need of many operators to stockpile in order to meet their legitimate business obligations. Nor does OSM believe that restrictions on inclusion of stockpiled minerals violate the rights of operators or that the requirement for compliance with the tonnage and revenue test on an annual basis contained in final § 702.17 sufficiently protects against operations falsely claiming the exemption. OSM does not believe operators have rights to include unlimited and uncontrolled stockpile tonnages when they claim the exemption. Standards for stockpiling must be provided since ordinary marketing practices require some stockpiling, and, without such standards, the exemption could be easily abused by operators stockpiling for markets that do not exist.

In response to the comment that the rule "totally ignores the condition of the market and gives too much discretion," the inclusion of paragraphs (b)(2) through (4) provides guidance to regulatory authorities.

As for the request for guidelines concerning what are "adequate and verifiable records," the regulatory authority has the discretion to decide what records establish an operator's claim to the need for stockpiling. OSM will provide further guidance for Federal program States if needed.

OSM agrees with the commenter who indicated stockpiling should be allowed only to the extent that it is a general custom of the industry and only for a limited time and believes that the final provisions meet the substance of the comment.

In response to the comment that because seasonal stockpiling and subsequent sales will be balanced, there is no need to include stockpiles in an exemption test made at the end of each year, OSM does not believe that such a balance will always occur and the

commenter offers no evidence for his contention. Finally, regarding the comment that the issue of stockpiling should be left to the individual States, OSM believes that this approach would not fulfill its responsibility to implement the incidental mining exemption.

#### *Section 702.17 Revocation and Enforcement*

Final § 702.17 establishes the regulatory authority's responsibility for annual compliance reviews of exempt operations and for revocation of the incidental mining exemption for mining areas that do not meet the exemption criteria. The final rule also provides for direct enforcement action for violations of the regulatory program in certain circumstances. Section 702.17 of the final rule is similar to the modified proposal issued on February 24, 1988, but is substantially different, for reasons described below, from the original proposal of June 1, 1987.

Final § 702.17(a) requires the regulatory authority to conduct an annual compliance review of each exempt mining area, utilizing the annual report, an on-site inspection and any other information available to the regulatory authority. If any mining area is not in compliance with the requirements of § 702.14, the regulatory authority shall notify the mine operator that the exemption for that mining area may be revoked. This provision was added to the final rule so that the regulatory authority will ensure that each mining area is in annual compliance with the exemption criteria of final § 702.14 on a cumulative basis. The requirement for an annual compliance review for each mining area was added in response to a comment and to ensure that the annual report is analyzed by the regulatory authority and the mining area is inspected at least once each year.

Final § 702.17(b) is based upon § 702.17(a) of the February 24, 1988 proposal. Final paragraph (b) provides that if the regulatory authority has reason to believe that a specific mining area is not exempt, was not exempt under the provisions of this part or counterpart provisions of the State regulatory program at the end of the previous reporting period, or will be unable to satisfy the exemption criteria at the end of the current reporting period, the regulatory authority shall notify the operator that the exemption may be revoked and the reason(s) therefor. The exemption will be revoked unless the operator demonstrates to the regulatory authority within 30 days that the mining area in question should continue to be exempt. The final rule specifies that the possibility of past,

present or future lack of compliance is sufficient to initiate the exemption revocation process. The February 1988 proposal only mentioned possible current lack of compliance as grounds for initiating the process. OSM made this change to avoid placing an unnecessary limitation on the scope of the regulatory authority's powers and to track the requirement for cumulative compliance evaluated annually. For example, the regulatory authority may have evidence that the mining area is currently out of compliance based on a continually applied exemption criterion such as the stratigraphic test. Or, the regulatory authority may have evidence that the mining area was or will be out of compliance with one of the annually applied exemption criteria such as the tonnage or revenue test.

The final rule also differs from the February 1988 proposal by the inclusion of the phrase "counterpart provisions of the State regulatory program" in recognition of the fact that this final rule becomes effective in primacy States only after incorporation into the State regulatory program.

Final § 702.17(c)(1) states that if the regulatory authority finds that an operator has not demonstrated that activities conducted in the mining area qualify for the exemption, the regulatory authority shall revoke the exemption and immediately notify the operator and any intervenors in the application process. If a decision is made not to revoke the exemption, both the operator and any intervenors must be given immediate notice. The notice requirements have been included in the final rule to allow adversely affected persons to seek administrative review.

Final paragraph (c)(2) states that a decision whether to revoke an exemption shall be subject to administrative review under 43 CFR 4.1280 when OSM is the regulatory authority or a State program equivalent when the State is the regulatory authority. A request for administrative review may be filed by any adversely affected person within 30 days of notification of the decision. Paragraph (c)(2) has been modified from the February 24, 1988 proposal to provide for a right of administrative review when the decision is made not to revoke an exemption. The 30-day period to seek review has been included to allow for finality of the decision if no review is sought and is consistent with the period allowed for seeking administrative review of other decisions under the Act, such as permit issuance.

Paragraph (c)(3) states that the filing of a petition for review does not automatically suspend the effect of a



decision. This provision was added to the final rule in order to clarify the effect of the revocation decision.

Final § 702.17(d) specifies that (1) an operator mining in accordance with the terms of an approved exemption shall not be cited for violations of the regulatory program which occurred prior to the revocation of the exemption and that (2) an operator who does not conduct activities in accordance with the terms of an approved exemption and who knows or should know such activities are not in accordance with the approved exemption shall be subject to direct enforcement action for violations of the regulatory program which occur during the period of such activities.

In its original proposal of June 1, 1987, OSM suggested provisions that would have allowed enforcement action to be taken by the regulatory authority or OSM if an operation claiming an exemption was in fact not exempt. Such an approach made sense where operators did not need approval to operate under the exemption. Under proposed § 702.17(a), if the regulatory authority or OSM had cause to believe that the mining operation claiming exemption was not exempt under the provisions of part 702, appropriate enforcement action would have been taken under the relevant inspection, enforcement, and civil penalty provisions of either the applicable provisions of State or Federal regulations. If the regulatory authority or OSM had found that activities conducted in the mining area constituted surface coal mining operations, the regulatory authority or OSM would have, in accordance with proposed § 702.17(b) ordered the payment of abandoned mine reclamation fees in accordance with part 870 of this Chapter. OSM or the regulatory authority would also have ordered the operator to cease surface coal mining operations and either obtain a valid surface coal mining permit or undertake and accomplish within a specified time period remedial reclamation in accordance with the standards of the regulatory program applicable to conditions existing on the mining area. As specified in § 702.17(c) of the June 1, 1987 proposal, the regulatory authority or OSM could have required the operator to submit a reclamation bond pursuant to the regulatory program to ensure the performance of remedial reclamation.

The February 24, 1988 proposal modified the original proposal to reflect the change from a notice of exemption process to an application for exemption process. The February 1988 proposal

also would have related direct enforcement liability to the operator's good faith or lack thereof. As discussed in the preamble to final § 702.15, OSM has not included the good faith standard in the final rule because it is subjective and difficult to prove. Instead, OSM has chosen to focus on objective standards of whether the mining area is operated in accordance with the terms of the approved exemption, a question of fact, and if not, whether the operator knew or should have known about the failure to comply. The final rule also differs from the February 1988 proposal by leaving out the reference to the Act in proposed § 702.17(c)(1). As discussed below, this change was made in response to a comment. It should be noted that § 702.17(d)(1) applies only to operators mining under an approved exemption and that direct enforcement action is possible against operators who assert the exemption, but have not yet received approval from the regulatory authority.

Final § 702.17(d)(3) states that upon revocation of an exemption or denial of an exemption application, an operator shall stop conducting surface coal mining operations until a permit is obtained and shall comply with the reclamation standards of the applicable regulatory program with regard to conditions, areas and activities existing at the time of revocation or denial. This provision was added by OSM to clarify operators' obligations after revocation of the exemption or denial of an exemption application. Such obligations exist regardless of whether a specific provision is included in part 702. Under the final rule, if an exemption is revoked or an application denied, reclamation must begin immediately (even though the operator does have the option of applying for a coal mining permit). At the time of revocation, the unreclaimed area is not immediately in violation of the applicable program. The operator should be given a reasonable time to reclaim the area. If the reclamation is not accomplished in a timely manner, however, then the regulatory authority should cite violations of the applicable regulatory program. This provision is an outgrowth of the recent IBLA decision in *Cherry Hill Development v. OSMRE*, 110 IBLA 185, August 17, 1989.

Several commenters disagreed with § 702.17(a) of the February 24, 1988 proposal, which would have provided that if the regulatory authority has reason to believe that an operation granted an exemption for a specific mining area is not exempt, the regulatory authority shall notify the operator that the exemption may be revoked unless the operator

demonstrates to the regulatory authority within 30 days that the mining area in question meets the exemption criteria. These commenters believed the provision "risk grave environmental damage." They argued that after OSM's experience with "the wide-spread abuse of the two acre exemption, one would think the agency would seek to avoid creation of a new generation of unreclaimed surface coal mining sites." The commenters contended that the exemption holder has "full and fair opportunity to defend the exemption status after issuance of an enforcement order." The commenters further argued that to the extent that the operation is "a sham and has operated outside of its boundaries, an imminent harm cessation order is mandatory under the Act and the Secretary's regulations." In summary, these commenters believed that "in no event is non-enforcement appropriate in a situation where the Secretary has reason to believe that the activity may be in violation of the Act."

OSM has determined to retain the provision requiring the regulatory authority to notify an operator of potential revocation of the incidental mining exemption and to require him to demonstrate that he continues to be entitled to the exemption. In effect, this is a kind of "show cause" proceeding and places the burden upon the operator to show he continues to qualify for the exemption. In such situations, allowing the operator 30 days to prepare materials to show that the exemption should not be revoked is a fair procedure. It would be unfair to order cessation of operations until the operator has been given the opportunity to demonstrate that the mining area in question is, in fact, in compliance. In addition, if a person is knowingly not complying with the terms of an approved exemption, final § 702.17(d)(2) does provide for direct enforcement action, including imminent harm cessation orders when justified.

The procedures of final § 702.17 (b) and (c) are consistent with the Act, including section 521. The purpose of these procedures is to establish an orderly method to determine whether a violation of the Act or regulatory program exists. If it is determined that an operation is not entitled to a previously approved exemption, the exemption is revoked and the operator must stop mining coal and reclaim the mining area to the standards of the appropriate regulatory program. The operator may apply for a coal mining permit at this time. If the operator continues to mine coal without a permit, the operator will be subject to the



issuance of a cessation order under 30 CFR part 843. This is certainly consistent with the spirit of the Act as expressed in the proviso of section 521(b) wherein blameless operators relying upon regulatory authority authorizations are given a reasonable time to come into compliance.

A commenter questioned whether an operator could seek administrative review of the notice required by § 702.17(a) of the February 1988 proposal when the regulatory authority has reason to believe that the operation granted an exemption for a specific mining area is not exempt.

The notice specified in final § 702.17(b) is neither an enforcement sanction nor a penalty provision for which administrative review would be appropriate. It merely initiates an inquiry. If, however, the regulatory authority finds under the proceeding initiated pursuant to § 702.17(b) of the final rule that the activities conducted in the mining area do not qualify for the exemption, then § 702.17(c) of the final rule provides that the regulatory authority shall revoke the exemption. This revocation decision is subject to administrative review under 43 CFR 4.1280 when OSM is the regulatory authority or a State program equivalent when the State is the regulatory authority.

Several commenters urged OSM to specify a minimum inspection frequency for exempt operations and a requirement for periodic review by the regulatory authority of the status of the exemption.

OSM agrees that the regulatory authority should do more than receive annual reports; it should also analyze them and act on any determinations it makes pursuant to them. Thus, § 702.17(a) of the final rule requires regulatory authorities to conduct an annual compliance review of exempt mining areas, utilizing the annual report, an on-site inspection and any other available information. OSM will monitor State compliance review and inspection activities as part of its oversight responsibilities. The State regulatory authorities may require, at their discretion, more frequent reporting or may conduct more frequent inspections.

Several commenters stated that OSM's data shows that "few of the operations using the exemption to date have met even the tonnage test for the exemption." One commenter indicated that OSM "must take immediate enforcement action against those who operated a surface coal mining operation in violation of the Act and the exemption." The commenter urged that the regulatory authority "must issue an

imminent harm cessation order against these operations" and, at a minimum, "ensure that the operators responsible for these sites are placed on the permit block list until the mine site is reclaimed."

OSM is taking appropriate enforcement action against mining areas that may be in violation of the existing regulations. If, subsequent to the effective date of this final rule or the effective date of counterpart provisions of the State regulatory program, a mining area will not qualify for the exemption under the standards of this rule, the operator must reclaim the mining area to the standards of the applicable regulatory program. The operator may also apply for a coal mining permit. If following revocation of an exemption the operator does not meet the reclamation obligation, the operator will be subject to direct enforcement action. As discussed above, this final rule also addresses the problem of operators not acting in accordance with approved exemptions by subjecting them to direct enforcement action for periods when they knew or should have known such activities were not in accordance with the approved exemption.

One commenter requested that the term "Act" be deleted from § 702.17(c)(1) of the February 1988 proposal. The purpose of this change, according to the commenter, is to "conform the section to the remaining portions of the rule, which properly rely upon the applicable State program as the benchmark for compliance." The commenter also contended that the change is consistent with the statute, which designates the State program as the applicable law under which the operator must comply.

OSM agrees with the commenter and has decided not to include the reference to the Act in final § 702.17(d)(1) because the applicable State program is the "benchmark" for compliance. This change will not have any major impacts because, when approved, State programs should reflect the requirements of the Act. Further discussion of this subject appears in OSM's final rule published on July 14, 1988 (52 FR 26728).

Some commenters suggested that, as an alternative to the good faith standard of § 702.17(c) of the February 1988 proposal, OSM "base the collection of abandoned mine reclamation (AML) fees on an annual test and the reclamation requirement on a threshold test which is calculated over the life of the mine."

In OSM's view, AML fees are owed by operators for coal produced from

surface coal mining operations subject to the provisions of the Act. See section 402(a), 30 U.S.C. 1232. Once it is determined that a mining area does not qualify for the incidental mining exemption under the criteria established by final § 702.14 or counterpart provisions of a State program, the operator becomes liable for AML fees for all coal produced since October 1, 1977 (except as provided by 30 CFR 870.11). The money is owed to the United States upon a final determination that the mining area does not satisfy the standards of the exemption and must be paid within 30 days from that determination.

Several commenters argued for the removal of the "period of time" language of § 702.17(c)(2) of the February 1988 proposal. The commenters believed that the language was improper in that it suggested that there might exist a period of time after discovery of the violation of the exemption when the operator was not subject to immediate, direct enforcement by the regulatory authority.

OSM agrees with the comment. Since OSM did not intend that the final rule be interpreted this way, it has deleted the phrase "period of time" from final § 702.17(d)(2).

One commenter indicated that § 702.17 should limit the responsibility for ordering payment of abandoned mine reclamation fees for non-exempt operations to OSM. For this commenter, collection of the abandoned mine reclamation fee is a function of OSM, not the State authorities.

OSM agrees that it is responsible for collecting reclamation fees. The language the commenter objected to was included in § 702.17(b)(1) as proposed on June 1, 1987. That language does not appear in final § 702.17.

#### *Section 702.18 Reporting Requirements*

Final § 702.18 requires a person who has received an exemption from the regulatory authority for a mining area to file a written report annually for that mining area. Final § 702.18 is based upon reporting requirements proposed in the February 24 and April 25, 1988 notices. Changes from the proposals relate primarily to when the reports must be filed and the periods that they must cover. These changes are necessitated by adoption of the cumulative production standard in final § 702.14, and reflect the calendar quarter approach embodied in that section.

The requirement to file an annual report is set forth in final § 702.18(a)(1). This paragraph provides that following approval by the regulatory authority of an exemption for a mining area, the



person receiving the exemption shall, for each mining area, file a written report annually with the regulatory authority containing the information specified in § 702.18(b). The reporting requirement was proposed at § 702.18(a) of both the February and April 1988 proposals.

Final § 702.18(a)(2) specifies that the report shall be filed no later than 30 days after the end of the 12-month period as determined in accordance with the definition of cumulative measurement period in § 702.5(a). This means that for operations in Federal program States or on Indian lands that extracted coal or other minerals prior to April 1, 1990, the effective date of these rules, the report must be filed no later than April 30, 1991, and every April 30 thereafter over the life of the mining area. The period for which the cumulative production and revenue of such operations is calculated ends March 31 of each year. Final § 702.18(a)(2) is similar to § 702.18(b) of both the February and April 1988 proposals, except that the final rule refers to the cumulative measurement period definition for a determination of the period covered by the report.

For mining areas at which the extraction of coal and other minerals begins on or after April 1, 1990, the reporting date is no later than 30 days after the conclusion of the calendar quarter corresponding to the calendar quarter during which extraction of coal or other minerals commenced. In other words, if extraction of coal or other minerals at new mining areas begins between April 1 and June 30, cumulative production is measured for a period ending on June 30, and the report must be filed no later than July 30 of each year.

If extraction of coal or other minerals at new mining areas begins between July 1 and September 30, cumulative production is measured for a period ending on September 30, and the report must be filed no later than October 30 of each year.

If extraction of coal or other minerals at new mining areas begins between October 1 and December 31, cumulative production is measured for a period ending on December 31, and the report must be filed no later than January 30 of each year.

If extraction of coal or other minerals at new mining areas begins between January 1 and March 31, cumulative production is measured for a period ending on March 31, and the report must be filed no later than April 30 of each year.

For mining areas in primary States that extract coal or other minerals prior to the effective date of counterpart provisions in the State regulatory program, the first annual report does not have to be filed until after the effective date of the State regulations and must cover the appropriate 12-month period as described above.

Final § 702.18(a)(3) provides that the information in the report shall cover (i) annual production of coal and other minerals and annual revenue derived from coal and other minerals during the preceding 12-month period, and (ii) the cumulative production of coal and other minerals and the cumulative revenue derived from coal and other minerals. The annual and cumulative production information required in final paragraph (a)(3) is substantially the same as § 702.18(a)(1) and (2) of the February and April 1988 proposals.

Final § 702.18(b) identifies six items of information that must be included in the annual report for each mining area both on a cumulative and 12-month basis. Final paragraph (b) states that for each period and mining area covered by the report, the report shall specify (1) the number of tons of extracted coal sold in bona fide sales and total revenue derived from such sales, (2) the number of tons of coal extracted and used or transferred by the operator or related entity and the estimated fair market value of such coal, (3) the number of tons of coal stockpiled, (4) the number of tons of other commercially valuable minerals extracted and sold in bona fide sales and the total revenue derived from such sales, (5) the number of tons of other commercially valuable minerals extracted and used or transferred by the operator or related entity and the estimated total fair market value of such minerals, and (6) the number of tons of other commercially valuable minerals removed and stockpiled by the operator. Final paragraphs (b)(1) and (2) are identical to § 702.18(c)(1) and (2) of the April 1988 proposal. Final paragraphs (b)(4) and (5) are identical to § 702.18(c)(3) and (4) of the April 1988 proposal, except that the phrase "or transferred" has been added to each in the final rule to acknowledge that coal and other minerals may be used by or transferred to a related entity under final § 702.14. Final paragraphs (b)(3) and (6) were added to the final rule by OSM at the request of commenters to provide information concerning stockpiled minerals. OSM believes that the regulatory authority should have information on stockpiling in order to assess the status of the exemption.

OSM received many comments concerning the time periods for reporting

under this rule. Some commenters favored monthly reporting; the large majority of commenters favored annual reporting and still others favored longer periods to coincide with the life-of-mine option. Those favoring the shortest reporting periods stressed the need to ensure that the exemption would not be abused by operators. These commenters stated that operators are likely to maintain these data within their monthly production and sales reports and therefore should have no trouble providing the information to OSM. Moreover, the monthly reporting requirements, they asserted, would alert the regulatory authority quickly so that extensive environmental damage would not occur during an exemption term. Some commenters who favored monthly reporting periods went on to state that, at a minimum, OSM should establish annual reports. In the commenters' view, this should be the longest permissible period. Any reporting period of longer duration, they argued, would be unworkable and unenforceable and would make closure and revocation a sham.

The vast majority of commenters favored an annual reporting requirement regarding tonnages of minerals extracted, documentation of sales or other commercial uses of the minerals, and such other information as the regulatory authority may require. Some of these commenters stated that annual reports would be more practical than life-of-mine or monthly reports. They asserted that allowing the determination to be made over the life of the mine would be too susceptible to manipulation by the operator and could result in widespread abuse of the Act. A period shorter than 12 months, however, was also decried both as an undue burden on the operator and because the sequential removal of strata might skew comparative tonnages. One of the commenters acknowledged that an annual reporting requirement in conjunction with a gross revenues test would not impose a reporting burden on operators since every operator generates such figures in developing its depletion allowance for tax return purposes.

Alternatively, a few commenters favored longer reporting periods to coincide with the life-of-mine standard. These commenters believed that longer reporting periods were absolutely necessary due to the time required for removal of various layers of materials and minerals. They argued that where the coal seam lies near the surface and above other commercial minerals, the excavation of the coal will skew the reporting figures despite the fact that the



total coal reserves within the mining area are well below the 16% percent of other commercially valuable minerals which will be mined. One commenter stated that OSM should carefully review and consider Ohio's rule which allows the Chief of the Division of Reclamation latitude in determining under which law an operator will be required to perform. Ohio's Chief, the commenter stated, reviews not only the quantity of coal and minerals removed from a mining area during a permit year, but also the estimated future production of coal and minerals to be produced from that mining area, along with the available market for those minerals and coal and the operator's ability to service available markets. Providing for similar discretion would enable the regulatory authority to allow mining to occur even though during one 12-month period the 16 2/3 percent tonnage test might not be met. This commenter concluded that if OSM chooses a shorter time period or an alternative less flexible than Ohio's rules, either the smaller incidental operators will cease mining other minerals and attempt to perform as small coal operators, thus spoiling reserves of clay, shale and limestone and driving up the price of other minerals due to higher trucking costs; or the larger incidental coal operators, e.g., many of the clay producing brick companies, will have to decide whether to mine coal under the Act, "which is unworkable for other mineral mining operations" or not to mine coal and treat it as overburden. The commenter believed any of these scenarios would be "philosophically wrong, economically unsound, and environmentally ridiculous."

A number of specific comments were received. One commenter suggested that a "more liberal reporting period would be appropriate for small operators who mine less than, for instance, 10,000 tons of coal per year." One commenter stated that the reporting requirements failed to include any reference to the minerals stockpiled for bona fide commercial sale and failed to specify any method of calculating or reporting such data for the calculation of an operator's claim to exemption. One commenter suggested inclusion of the following additional information in the report: "the total tonnages of coal and other commercially valuable minerals extracted as of the date of the report and the tonnages of coal and other commercially valuable minerals extracted for that month." One commenter suggested "detailed documentation on the disposition of the other minerals and of the coal, including not merely the sale or use but the

specific sale, the value per ton of the mineral and the coal, and the amount of other mineral and coal, stockpiled or otherwise extracted but not sold." One commenter suggested that the reporting requirement should be modified to include "the average unit price received or expected for the coal and noncoal materials; the gross value of the coal and noncoal materials sold or used for the report period;" and "estimates of the gross value of the coal and noncoal materials sold or used in each year of the operation's life."

OSM has concluded that an annual report is the best way of apprising the regulatory authority of the status of the exempt operation, while avoiding the burden of paperwork on the regulatory authority and the operator that would result from more frequent reporting requirements. Less frequent reporting, e.g., five years or life-of-mine as some commenters suggested, would cover too long a period of time for, if a violation were established, it would be difficult to reclaim since an operator would have by then displaced considerable overburden and mined through too large an area. By requiring information on "cumulative production" and defining the term, OSM believes that it has established a clear and workable standard as requested by commenters that will neither be subject to abuse nor be an unreasonable burden on operators, the regulatory authority, or the public.

In regard to specific comments on this section, OSM does not believe that a less frequent reporting period for small operators is possible or desirable. Section 701(28) of the Act does not make a distinction between large and small operators and OSM has no other basis for allowing lesser requirements for small operators. OSM agrees with the comment on stockpiling and has included stockpiling among the list of items that the operator needs to report. The pertinent provisions of final §§ 702.14 and 702.16 should provide the requested guidance as to the appropriate method for calculating stockpiles. OSM agrees with the comment requesting the total tonnages of coal and other commercially valuable minerals extracted as of the date of the report be included in the information requirements and has retained this provision in the final rule. The commenter also requested inclusion of monthly production figures in the report. OSM does not see the need for such specificity as long as the operation is in compliance at the end of each 12-month period. Likewise, OSM sees no need to require detailed documentation on the disposition of the other minerals and

coal and has therefore not required such detail in the report. The regulatory authorities are, however, free to require or request any documentation necessary to establish or evaluate the status of the exemption. The comments that the report should include the average unit price received or expected or the gross value of coal and noncoal materials sold or used for the report period were not adopted because reporting of cumulative revenue pursuant to final § 702.18(b) allows evaluation of compliance with the revenue test. The comment requesting estimates of gross value of the coal and noncoal materials sold or used in each year of the operations life was not adopted because the exemption application requirements for submittal of estimated revenues and estimated fair market values at final § 702.12 (d) and (e) will provide the same information.

#### *E. Section 750.21 Coal Extraction Incidental to the Extraction of Other Minerals*

The final rule adopted today amends 30 CFR part 750 by adding a new § 750.21, which states that 30 CFR part 702 is applicable on Indian lands. This portion of the final rule is identical to the June 1, 1987 proposal.

#### *F. Section 870.11(d) Applicability*

Final § 870.11(d) addresses the applicability of the reclamation fee obligation to coal produced from mining areas exempt either under the final rule adopted today or under counterpart provisions of a State program. The final rule provides that for Federal program States and on Indian lands, the extraction of coal in accordance with part 702 of this Chapter is exempt from the applicability of the reclamation fee obligation. In States with approved programs, the final rule retains the any-12-consecutive-months standard until the State incorporates regulations adopted pursuant to part 703 into the State program. Subsequently, the State's counterpart regulations will govern.

The final rule is similar to the June 1, 1987 proposal except that instead of merely cross-referencing part 702, the final rule retains the previous standard for State programs until provisions counterpart to this final rule are approved. Without this change and in the absence of counterpart provisions to part 702, there would have been no exemption standard in primacy States for mining areas where the coal extracted did not exceed the 16% threshold. The final rule does not relieve operators from existing obligations to pay reclamation fees. No comments



were received on this part of the final rule.

The justification for removing the any-consecutive-12-month standard from § 807.11(d) once the new rules become effective in a State is the same as for adopting the cumulative production standard in § 702.14. The June 30, 1982 final preamble to the previous § 870.11(d) did not discuss how the 12-month constraint for title IV purposes related to how the exemption should be applied for title V purposes (47 FR 28594). The preamble relied upon section 412(a) of the Act, 30 U.S.C. 1242(a), for authority in promulgating the rule, and did not interpret the proviso in section 701(28) of the Act. The preamble stated that in the absence of the 12-month qualifying period, "incidental production would be subject to quarterly determinations of applicability, because production reports and fee payments are due quarterly, even though the extraction of coal over a longer period (e.g., one year or the life of the project) did not exceed 16% percent of the mineral tonnage removed." 47 FR 28577. Although OSM agrees that an operation must be exempt to avoid reclamation fee liability, OSM does not agree that the quarterly payment obligations in Title IV govern the interpretation of section 702(28) of the Act. On the contrary, section 402(a) imposes reclamation fee obligations upon "coal mining operations subject to the provisions of this Act. \* \* \*". Thus, section 701(28) governs the scope of Title IV obligations, not vice versa. It makes sense for the exemption standards to be established in part 702 or counterpart provisions in State programs, and to be cross-referenced in § 870.11(d).

*G. Subchapter T—Programs for the Conduct of Surface Mining Operations within Each State and Effect in Federal Program States*

The final rule provides that part 702 will apply through cross-referencing in those States with Federal programs. This includes California, Georgia, Idaho, Massachusetts, Michigan, North Carolina, Oregon, Rhode Island, South Dakota, Tennessee and Washington. The Federal programs for these States appear at 30 CFR parts 905, 910, 912, 921, 922, 933, 937, 939, 941, 942 and 947 respectively. These cross references are identical to the June 1, 1987 proposal, except that California has been added because a Federal program for California was promulgated on July 13, 1988 (53 FR 26570-26579). In the proposal, OSM specifically requested comment as to whether unique conditions exist in any of these Federal program States or on Indian lands that

should be reflected either as changes to the national rules or as State-specific amendments to any or all of the Federal programs or the Indian lands program. No comments were received in response to this request.

*H. Effect of the Rule on State Programs*

Following promulgation of this rule, OSM will evaluate State programs to determine whether any changes in these programs will be necessary. If the Director determines that any State program provisions should be amended to be made no less effective than the revised Federal rules, the individual States will be notified in accordance with the provisions of 30 CFR 732.17.

**III. Procedural Matters**

*Federal Paperwork Reduction Act*

The collections of information contained in §§ 702.11, 702.12, 702.13, 702.15 and 702.18 have been approved by the Office of Management and Budget (OMB) under 44 U.S.C. 3501 *et seq.* and assigned clearance number 1029-0089.

*Executive Order 12291 and Regulatory Flexibility Act*

The Department of the Interior has determined that this document is not a major rule under E.O. 12291, and certifies that it will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). The rule affects a relatively small number of noncoal mineral operations. The rule does not distinguish between small and large entities. The economic effects of the proposed rule are estimated to be minor and no incremental economic effects are anticipated as a result of the rule.

*National Environmental Policy Act*

OSM has prepared an environmental assessment (EA) on the impacts on the human environment of this rulemaking and has made a finding that the final rule will not significantly affect the quality of the human environment under section 102(C) of the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4332(2)(C). The EA is on file in the OSM Administrative Record, Room 5131, 1100 L Street, NW, Washington, DC.

*Executive Order 12630*

In accordance with the Attorney General's "Guidelines for the Evaluation of Risk and Avoidance of Unanticipated Takings," proposals developed and published prior to the issuance of the Executive Order and the guidelines are

excluded from coverage under the Executive Order.

*Author*

The principal author of this rule is Patrick D. Boyd, Division of Regulatory Programs, Office of Surface Mining Reclamation and Enforcement, 1951 Constitution Avenue, NW., Washington, DC 20240; telephone: 202-343-1864.

**List of Subjects**

*30 CFR Part 700*

Administrative practice and procedure, Reporting and recordkeeping requirements, Surface mining, Underground mining.

*30 CFR Part 702*

Administrative practice and procedures, Surface mining, Underground mining.

*30 CFR Part 750*

Indian lands, Reporting and recordkeeping requirements, Surface mining, Underground mining.

*30 CFR Part 870*

Reporting and recordkeeping requirements, Surface mining, Underground mining.

*30 CFR Parts 905 and 910*

Administrative practice and procedure, Environmental protection, Intergovernmental relations, Penalties, Surety bonds, Surface mining, Underground mining.

*30 CFR Part 912*

Intergovernmental relations, Surface mining, Underground mining.

*30 CFR Parts 921 and 922*

Administrative practice and procedure, Intergovernmental relations, Penalties, Surface mining, Underground mining.

*30 CFR Part 933*

Intergovernmental relations, Surface mining, Underground mining.

*30 CFR Parts 937 and 939*

Administrative practice and procedure, Intergovernmental relations, Penalties, Surface mining, Underground mining.

*30 CFR Part 941*

Intergovernmental relations, Surface mining, Underground mining.

*30 CFR Part 942*

Intergovernmental relations, Reporting and recordkeeping



requirements, Surface mining, Underground mining.

### 30 CFR Part 947

Intergovernmental relations, Surface mining, Underground mining.

Accordingly, 30 CFR parts 700, 702, 750, 870, 905, 910, 912, 921, 922, 933, 937, 939, 941, 942, and 947 are amended as set forth below:

Dated: November 21, 1989.

Dave O'Neal,

Assistant Secretary, Land and Minerals Management.

## PART 700—GENERAL

1. The authority citation for part 700 is revised to read as follows:

Authority: 30 U.S.C. 1201 *et seq.*, as amended; and Pub. L. 100-34.

2. Section 700.11(a)(4) is revised to read as follows:

### § 700.11 Applicability.

(a) \* \* \*

(4) The extraction of coal incidental to the extraction of other minerals where coal does not exceed 16% percent of the total tonnage of coal and other minerals removed for purposes of commercial use or sale in accordance with part 702 of this chapter.

\* \* \* \* \*

3. Part 702 is added to read as follows:

## PART 702—EXEMPTION FOR COAL EXTRACTION INCIDENTAL TO THE EXTRACTION OF OTHER MINERALS

Sec.

702.1 Scope.

702.5 Definitions.

702.10 Information collection.

702.11 Application requirements and procedures.

702.12 Contents of application for exemption.

702.13 Public availability of information.

702.14 Requirements for exemption.

702.15 Conditions of exemption and right of inspection and entry.

702.16 Stockpiling of minerals.

702.17 Revocation and enforcement.

702.18 Reporting requirements.

Authority: 30 U.S.C. 1201 *et seq.*, as amended.

### § 702.1 Scope.

This part implements the exemption contained in section 701(28) of the Act concerning the extraction of coal incidental to the extraction of other minerals where coal does not exceed 16% percent of the total tonnage of coal and other minerals removed for purposes of commercial use or sale.

### § 702.5 Definitions.

As used in this part, the following terms have the meaning specified, except where otherwise indicated:

(a) *Cumulative measurement period* means the period of time over which both cumulative production and cumulative revenue are measured.

(1) For purposes of determining the beginning of the cumulative measurement period, subject to regulatory authority approval, the operator must select and consistently use one of the following:

(i) For mining areas where coal or other minerals were extracted prior to August 3, 1977, the date extraction of coal or other minerals commenced at that mining area or August 3, 1977, or

(ii) For mining areas where extraction of coal or other minerals commenced on or after August 3, 1977, the date extraction of coal or other minerals commenced at that mining area, whichever is earlier.

(2) For annual reporting purposes pursuant to § 702.18 of this part, the end of the period for which cumulative production and revenue is calculated is either

(i) For mining areas where coal or other minerals were extracted prior to April 1, 1990, March 31, 1990, and every March 31 thereafter; or

(ii) For mining areas where extraction of coal or other minerals commenced on or after April 1, 1990, the last day of the calendar quarter during which coal extraction commenced, and each anniversary of that day thereafter.

(b) *Cumulative production* means the total tonnage of coal or other minerals extracted from a mining area during the cumulative measurement period. The inclusion of stockpiled coal and other mineral tonnages in this total is governed by § 702.16.

(c) *Cumulative revenue* means the total revenue derived from the sale of coal or other minerals and the fair market value of coal or other minerals transferred or used, but not sold, during the cumulative measurement period.

(d) *Mining area* means an individual excavation site or pit from which coal, other minerals and overburden are removed.

(e) *Other minerals* means any commercially valuable substance mined for its mineral value, excluding coal, topsoil, waste and fill material.

### § 702.10 Information collection.

The collections of information contained in §§ 702.11, 702.12, 702.13, 702.15 and 702.18 of this part have been approved by the Office of Management and Budget under 44 U.S.C. 3501 *et seq.* and assigned clearance number 1029-

0089. The information will be used to determine the initial and continuing applicability of the incidental mining exemption to a particular mining operation. Response is required to obtain and maintain the incidental mining exemption in accordance with section 701(28) of the Act.

Public reporting burden for this collection of information is estimated to average one hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Information Collection Clearance Officer, OSM Department of the Interior, 1951 Constitution Avenue, NW., Washington, DC 20240; and to the Office of Management and Budget, Paperwork Reduction Project (1029-0089), OMB, Washington, DC 20503.

### § 702.11 Application requirements and procedures.

(a)(1) Any person who plans to commence or continue coal extraction after April 1, 1990, under a Federal program or on Indian lands, or after the effective date of counterpart provisions in a State program, in reliance on the incidental mining exemption shall file a complete application for exemption with the regulatory authority for each mining area.

(2) Following incorporation of an exemption application approval process into a regulatory program, a person may not commence coal extraction based upon the exemption until the regulatory authority approves such application, except as provided in paragraph (e)(3) of this section.

(b) Existing operations. Any person who has commenced coal extraction at a mining area in reliance upon the incidental mining exemption prior to April 1, 1990, in a State with a Federal program or on Indian lands, or prior to the effective date of counterpart provisions in a State program, may continue mining operations for 60 days after such effective date. Coal extraction may not continue after such 60-day period unless that person files an administratively complete application for exemption with the regulatory authority. If an administratively complete application is filed within 60 days, the person may continue extracting coal in reliance on the exemption beyond the 60-day period until the regulatory authority makes an



administrative decision on such application.

(c) Additional information. The regulatory authority shall notify the applicant if the application for exemption is incomplete and may at any time require submittal of additional information.

(d) Public comment period. Following publication of the newspaper notice required by § 702.12(g), the regulatory authority shall provide a period of no less than 30 days during which time any person having an interest which is or may be adversely affected by a decision on the application may submit written comments or objections.

(e) Exemption determination. (1) No later than 90 days after filing of an administratively complete application, the regulatory authority shall make a written determination whether, and under what conditions, the persons claiming the exemption are exempt under this part, and shall notify the applicant and persons submitting comments on the application of the determination and the basis for the determination.

(2) The determination of exemption shall be based upon information contained in the application and any other information available to the regulatory authority at that time.

(3) If the regulatory authority fails to provide an applicant with the determination as specified in paragraph (e)(1) of this section, an applicant who has not begun may commence coal extraction pending a determination on the application unless the regulatory authority issues an interim finding, together with reasons therefor, that the applicant may not begin coal extraction.

(f) Administrative review. (1) Any adversely affected person may request administrative review of a determination under paragraph (e) of this section within 30 days of the notification of such determination in accordance with procedures established under 43 CFR 4.1280 when OSM is the regulatory authority or under corresponding State procedures when a State is the regulatory authority.

(2) A petition for administrative review filed under 43 CFR 4.1280 or under corresponding State procedures shall not suspend the effect of a determination under paragraph (e) of this section.

#### § 702.12 Contents of application for exemption.

An application for exemption shall include at a minimum:

(a) The name and address of the applicant;

(b) A list of the minerals sought to be extracted;

(c) Estimates of annual production of coal and the other minerals within each mining area over the anticipated life of the mining operation;

(d) Estimated annual revenues to be derived from bona fide sales of coal and other minerals to be extracted within the mining area;

(e) Where coal or the other minerals are to be used rather than sold, estimated annual fair market values at the time of projected use of the coal and other minerals to be extracted from the mining area;

(f) The basis for all annual production, revenue, and fair market value estimates;

(g) A description, including county, township if any, and boundaries of the land, of sufficient certainty that the mining areas may be located and distinguished from other mining areas;

(h) An estimate to the nearest acre of the number of acres that will compose the mining area over the anticipated life of the mining operation;

(i) Evidence of publication, in a newspaper of general circulation in the county of the mining area, of a public notice that an application for exemption has been filed with the regulatory authority (The public notice must identify the persons claiming the exemption and must contain a description of the proposed operation and its locality that is sufficient for interested persons to identify the operation.);

(j) Representative stratigraphic cross-section(s) based on test borings or other information identifying and showing the relative position, approximate thickness and density of the coal and each other mineral to be extracted for commercial use or sale and the relative position and thickness of any material, not classified as other minerals, that will also be extracted during the conduct of mining activities;

(k) A map of appropriate scale which clearly identifies the mining area;

(l) A general description of mining and mineral processing activities for the mining area;

(m) A summary of sales commitments and agreements for future delivery, if any, which the applicant has received for other minerals to be extracted from the mining area, or a description of potential markets for such minerals;

(n) If the other minerals are to be commercially used by the applicant, a description specifying the use;

(o) For operations having extracted coal or other minerals prior to filing an application for exemption, in addition to the information required above, the

following information must also be submitted:

(1) Any relevant documents the operator has received from the regulatory authority documenting its exemption from the requirements of the Act;

(2) The cumulative production of the coal and other minerals from the mining area; and

(3) Estimated tonnages of stockpiled coal and other minerals; and

(p) Any other information pertinent to the qualification of the operation as exempt.

#### § 702.13 Public availability of information.

(a) Except as provided in paragraph (b) of this section, all information submitted to the regulatory authority under this part shall be made immediately available for public inspection and copying at the local offices of the regulatory authority having jurisdiction over the mining operations claiming exemption until at least three years after expiration of the period during which the subject mining area is active.

(b) The regulatory authority may keep information submitted to the regulatory authority under this part confidential if the person submitting it requests in writing, at the time of submission, that it be kept confidential and the information concerns trade secrets or is privileged commercial or financial information of the persons intending to conduct operations under this part.

(c) Information requested to be held as confidential under paragraph (b) of this section shall not be made publicly available until after notice and opportunity to be heard is afforded persons both seeking and opposing disclosure of the information.

#### § 702.14 Requirements for exemption.

(a) Activities are exempt from the requirements of the Act if all of the following are satisfied:

(1) The cumulative production of coal extracted from the mining area determined annually as described in this paragraph does not exceed 16½ percent of the total cumulative production of coal and other minerals removed during such period for purposes of bona fide sale or reasonable commercial use.

(2) Coal is produced from a geological stratum lying above or immediately below the deepest stratum from which other minerals are extracted for purposes of bona fide sale or reasonable commercial use.

(3) The cumulative revenue derived from the coal extracted from the mining area determined annually shall not



exceed 50 percent of the total cumulative revenue derived from the coal and other minerals removed for purposes of bona fide sale or reasonable commercial use. If the coal extracted or the minerals removed are used by the operator or transferred to a related entity for use instead of being sold in a bona fide sale, then the fair market value of the coal or other minerals shall be calculated at the time of use or transfer and shall be considered rather than revenue.

(b) Persons seeking or that have obtained an exemption from the requirements of the Act shall comply with the following:

(1) Each other mineral upon which an exemption under this part is based must be a commercially valuable mineral for which a market exists or which is mined in bona fide anticipation that a market will exist for the mineral in the reasonably foreseeable future, not to exceed twelve months from the end of the current period for which cumulative production is calculated. A legally binding agreement for the future sale of other minerals is sufficient to demonstrate the above standard.

(2) If either coal or other minerals are transferred or sold by the operator to a related entity for its use or sale, the transaction must be made for legitimate business purposes.

#### § 702.15 Conditions of exemption and right of inspection and entry.

A person conducting activities covered by this part shall:

(a) Maintain on-site or at other locations available to authorized representatives of the regulatory authority and the Secretary information necessary to verify the exemption including, but not limited to, commercial use and sales information, extraction tonnages, and a copy of the exemption application and exemption approved by the regulatory authority;

(b) Notify the regulatory authority upon the completion of the mining operation or permanent cessation of all coal extraction activities; and

(c) Conduct operations in accordance with the approved application or when authorized to extract coal under § 702.11(b) or § 702.11(e)(3) prior to submittal or approval of an exemption application, in accordance with the standards of this part for Federal programs and on Indian lands or in accordance with counterpart provisions when included in State programs.

(d) Authorized representatives of the regulatory authority and the Secretary shall have the right to conduct inspections of operations claiming exemption under this part.

(e) Each authorized representative of the regulatory authority and the Secretary conducting an inspection under this part:

(1) Shall have a right of entry to, upon, and through any mining and reclamation operations without advance notice or a search warrant, upon presentation of appropriate credentials;

(2) May, at reasonable times and without delay, have access to and copy any records relevant to the exemption; and

(3) Shall have a right to gather physical and photographic evidence to document conditions, practices or violations at a site.

(f) No search warrant shall be required with respect to any activity under paragraphs (d) and (e) of this section, except that a search warrant may be required for entry into a building.

#### § 702.16 Stockpiling of minerals.

(a) *Coal.* Coal extracted and stockpiled may be excluded from the calculation of cumulative production until the time of its sale, transfer to a related entity or use:

(1) Up to an amount equaling a 12-month supply of the coal required for future sale, transfer or use as calculated based upon the average annual sales, transfer and use from the mining area over the two preceding years; or

(2) For a mining area where coal has been extracted for a period of less than two years, up to an amount that would represent a 12-month supply of the coal required for future sales, transfer or use as calculated based on the average amount of coal sold, transferred or used each month.

(b) *Other minerals.* (1) The regulatory authority shall disallow all or part of an operator's tonnages of stockpiled other minerals for purposes of meeting the requirements of this part if the operator fails to maintain adequate and verifiable records of the mining area of origin, the disposition of stockpiles or if the disposition of the stockpiles indicates the lack of commercial use or market for the minerals.

(2) The regulatory authority may only allow an operator to utilize tonnages of stockpiled other minerals for purposes of meeting the requirements of this part if:

(i) The stockpiling is necessary to meet market conditions or is consistent with generally accepted industry practices; and

(ii) Except as provided in paragraph (b)(3) of this section, the stockpiled other minerals do not exceed a 12-month supply of the mineral required for future sales as approved by the regulatory

authority on the basis of the exemption application.

(3) The regulatory authority may allow an operator to utilize tonnages of stockpiled other minerals beyond the 12-month limit established in paragraph (b)(2) of this section if the operator can demonstrate to the regulatory authority's satisfaction that the additional tonnage is required to meet future business obligations of the operator, such as may be demonstrated by a legally binding agreement for future delivery of the minerals.

(4) The regulatory authority may periodically revise the other mineral stockpile tonnage limits in accordance with the criteria established by paragraphs (b) (2) and (3) of this section based on additional information available to the regulatory authority.

#### § 702.17 Revocation and enforcement.

(a) Regulatory authority responsibility. The regulatory authority shall conduct an annual compliance review of the mining area, utilizing the annual report submitted pursuant to § 702.18, an on-site inspection and any other information available to the regulatory authority.

(b) If the regulatory authority has reason to believe that a specific mining area was not exempt under the provisions of this part or counterpart provisions of the State regulatory program at the end of the previous reporting period, is not exempt, or will be unable to satisfy the exemption criteria at the end of the current reporting period, the regulatory authority shall notify the operator that the exemption may be revoked and the reason(s) therefor. The exemption will be revoked unless the operator demonstrates to the regulatory authority within 30 days that the mining area in question should continue to be exempt.

(c)(1) If the regulatory authority finds that an operator has not demonstrated that activities conducted in the mining area qualify for the exemption, the regulatory authority shall revoke the exemption and immediately notify the operator and intervenors. If a decision is made not to revoke an exemption, the regulatory authority shall immediately notify the operator and intervenors.

(2) Any adversely affected person may request administrative review of a decision whether to revoke an exemption within 30 days of the notification of such decision in accordance with procedures established under 43 CFR 4.1280 when OSM is the regulatory authority or under corresponding State procedures when a State is the regulatory authority.



(3) A petition for administrative review filed under 43 CFR 4.1280 or under corresponding State procedures shall not suspend the effect of a decision whether to revoke an exemption.

(d) *Direct enforcement.* (1) An operator mining in accordance with the terms of an approved exemption shall not be cited for violations of the regulatory program which occurred prior to the revocation of the exemption.

(2) An operator who does not conduct activities in accordance with the terms of an approved exemption and knows or should know such activities are not in accordance with the approved exemption shall be subject to direct enforcement action for violations of the regulatory program which occur during the period of such activities.

(3) Upon revocation of an exemption or denial of an exemption application, an operator shall stop conducting surface coal mining operations until a permit is obtained and shall comply with the reclamation standards of the applicable regulatory program with regard to conditions, areas and activities existing at the time of revocation or denial.

#### § 702.18 Reporting requirements.

(a)(1) Following approval by the regulatory authority of an exemption for a mining area, the person receiving the exemption shall, for each mining area, file a written report annually with the regulatory authority containing the information specified in paragraph (b) of this section.

(2) The report shall be filed no later than 30 days after the end of the 12-month period as determined in accordance with the definition of "cumulative measurement period" in § 702.5 of this part.

(3) The information in the report shall cover:

(i) Annual production of coal and other minerals and annual revenue derived from coal and other minerals during the preceding 12-month period, and

(ii) The cumulative production of coal and other minerals and the cumulative

revenue derived from coal and other minerals.

(b) For each period and mining area covered by the report, the report shall specify:

(1) The number of tons of extracted coal sold in bona fide sales and total revenue derived from such sales;

(2) The number of tons of coal extracted and used or transferred by the operator or related entity and the estimated total fair market value of such coal;

(3) The number of tons of coal stockpiled;

(4) The number of tons of other commercially valuable minerals extracted and sold in bona fide sales and total revenue derived from such sales;

(5) The number of tons of other commercially valuable minerals extracted and used or transferred by the operator or related entity and the estimated total fair market value of such minerals; and

(6) The number of tons of other commercially valuable minerals removed and stockpiled by the operator.

#### PART 750—REQUIREMENTS FOR SURFACE COAL MINING AND RECLAMATION OPERATIONS ON INDIAN LANDS

4. The authority citation for part 750 continues to read as follows:

Authority: 30 U.S.C. 1201 *et seq.*, as amended; 5 U.S.C. 301; and Pub. L. 100-34.

5. Part 750 is amended by adding § 750.21 as follows:

§ 750.21 Coal extraction incidental to the extraction of other minerals.

Part 702 of this chapter is applicable on Indian lands.

#### PART 870—ABANDONED MINE RECLAMATION FUND—FEE COLLECTION AND COAL PRODUCTION REPORTING

6. The authority citation for part 870 continues to read as follows:

Authority: 30 U.S.C. 1201 *et seq.*, as amended; and Pub. L. 100-34.

7. Section 870.11(d) is revised to read as follows:

#### § 870.11 Applicability.

\* \* \* \* \*

(d) The extraction of coal incidental to the extraction of other minerals where coal does not exceed 16% percent of the total tonnage of coal and other minerals removed for commercial use or sale

(1) In accordance with part 702 of this chapter for Federal program States and on Indian lands or

(2) In any twelve consecutive months in a State with an approved State program until counterpart regulations pursuant to part 702 of this chapter have been incorporated into the State program and in accordance with such counterpart regulations, thereafter; and

\* \* \* \* \*

#### SUBCHAPTER T—PROGRAMS FOR THE CONDUCT OF SURFACE MINING OPERATIONS WITHIN EACH STATE

8. The authority citations for parts 905, 910, 912, 921, 922, 933, 937, 939, 941, 942, and 947 continue to read as follows:

Authority: 30 U.S.C. 1201 *et seq.*, as amended; and Pub. L. 100-34.

9. Parts 905, 910, 912, 921, 922, 933, 937, 939, 941, 942, and 947 are amended by adding the following section (the wording for the section added is the same for each affected part.):

§ .702 Exemption for coal extraction incidental to the extraction of other minerals.

Part 702 of this chapter, Exemption for Coal Extraction Incidental to the Extraction of Other Minerals, shall apply to any person who conducts coal extraction incidental to the extraction of other minerals for purposes of commercial use or sale.

\* \* \* \* \*

[FR Doc. 89-29434 Filed 12-19-89; 8:45 am]

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# **Register Federal**

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**Wednesday  
December 20, 1989**

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## **Part III**

### **Environmental Protection Agency**

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**40 CFR Parts 35 and 142**

**National Primary Drinking Water  
Regulations Implementation; Primary  
Enforcement Responsibility; Final Rule**



**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Parts 35 and 142**

[WH-FRL-3576-9]

RIN 2040-AB26

**National Primary Drinking Water Regulations Implementation; Primary Enforcement Responsibility****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

**SUMMARY:** This action amends the regulations found in subpart B of 40 CFR part 142 that establish requirements for States to obtain primary enforcement responsibility ("primacy") for the Public Water System Supervision (PWSS) Program, authorized under the Safe Drinking Water Act (SDWA) (42 U.S.C. 300f et seq.). This rule establishes the procedures and deadlines for State submission and EPA review and approval or disapproval of primacy program changes, and the actions to be taken by EPA if States with primacy do not adopt the new requirements of the SDWA Amendments of 1986 pursuant to the schedule identified in this rule. This rule also changes the frequency of some State reports to EPA from annual to quarterly, and adds a requirement for States to adopt EPA's determination of best available technology (BAT) for use in granting variances from national primary drinking water regulations (NPDWRs). This rule also amends the State grant regulations found in Part 35 Subpart A to require Indian tribes to use the program grants to demonstrate program capability.

**EFFECTIVE DATE:** The amendments to 40 CFR parts 35 and 142 contained in this rule will take effect January 19, 1990. In accordance with 40 CFR 23.7, this regulation shall be considered final Agency action for the purpose of judicial review at 1:00 PM eastern time on January 3, 1990.

**ADDRESSES:** Public documents and supporting documents for the rulemaking are available for review during normal business hours at EPA, Room 1101 East Tower, 401 "M" Street, SW., Washington, DC 20460; telephone (202) 382-5522.

**FOR FURTHER INFORMATION, CONTACT:** The Safe Drinking Water Hotline, toll-free (800) 426-4791, or in Washington, DC at (202) 382-5533, or Carl Reeves, Deputy Director, State Programs Division, Office of Drinking Water, 401 "M" Street, SW., Washington, DC 20460, telephone (202) 382-5522.

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**I. Statutory Authority**

Section 1413 of the Safe Drinking Water Act ("SDWA" or "the Act") establishes requirements a State must meet to obtain primary enforcement responsibility ("primacy") for the Public Water System Supervision (PWSS) Program. These include: (1) adopting drinking water regulations no less stringent than the national primary drinking water regulations (NPDWRs) in effect under sections 1412(a) and 1412(b); (2) adopting and implementing adequate procedures for enforcement; (3) keeping records and making such reports with respect to its activities as EPA may require by regulation; (4) issuing variances and exemptions (if allowed by the State) under conditions no less stringent than allowed by sections 1415 and 1418; and (5) adopting and being capable of implementing an adequate plan for the provision of safe drinking water under emergency situations.

**II. Regulatory Background**

On August 2, 1988, EPA proposed to amend the regulations setting requirements for State primacy (53 FR 29194). The primacy regulations (40 CFR part 142, Subpart B) set out requirements for States to obtain primacy for the PWSS Program, as authorized by

Section 1413 of the SDWA. EPA first promulgated these regulations on January 20, 1976; since then, the basic requirements to obtain primacy have changed little. However, the operation and scope of the PWSS Program have changed considerably since the regulations were first promulgated. With the exception of Wyoming, Indiana, and the District of Columbia all eligible States and territories have obtained PWSS primacy and are implementing PWSS programs. In addition, the SDWA Amendments of 1986 made sweeping changes in the scope and content of the drinking water program, as described in Section IV.B below.

With these extensive changes in the Act and the program, portions of the primacy regulations at 40 CFR part 142, Subpart B have become outdated. In particular, the existing primacy regulations do not contain explicit procedures that States with primacy must follow in order to modify their programs to adopt new or revised EPA NPDWRs. These procedures are added by today's final rule.

**III. Public Comments on the Proposal**

EPA requested comments on all aspects of the August 2, 1988 proposal, including specific issues identified in the preamble. EPA received 67 written comments on the proposed rule. Fifty-six written comments were received from States or local governments and eleven written comments were received from public or professional organizations. EPA held one public hearing on the proposed rule on August 30, 1988. Two representatives of professional organizations made oral statements at that time.

A summary of the major comments and the Agency's responses to the issues raised are presented in the following section. The Agency's detailed responses to the comments received are presented in a document titled "Response to Comments Received on the Proposed Primary Enforcement Responsibility Requirements of August 2, 1988" which is available in the public docket for this rulemaking.

**IV. Summary and Explanation of Today's Action****A. Summary of Changes to Subpart B**

Table 1 shows the relationship between the amendments to the PWSS primacy regulations in 40 CFR part 142, subpart B and the existing regulations in that subpart.



TABLE 1.—SUMMARY OF CHANGES TO 40 CFR PART 142, SUBPART B

Subpart B as revised	Content of revised section	Subpart B previously	Changes made
142.2.....	Definitions.....	142.2.....	Adds definitions of "Approved State Primacy Program" and "State Program Revision."
142.10.....	Requirements for a determination of primary enforcement responsibility.	142.10.....	Makes conforming and clarifying changes; adds new BAT requirement for variances.
142.11.....	Initial determination of primacy enforcement authority.	142.11; 152.12(a).....	Makes conforming changes and redesignates; adds Attorney General statement requirement.
142.12.....	Revision of State programs.....		New section adds schedule and procedures for revision of State programs.
142.13.....	Public hearing.....	142.13.....	Makes conforming changes.
142.14.....	Records kept by States.....	142.14.....	Unchanged.
142.15.....	Reports by States.....	142.15.....	Amended to change some State reporting from annual to quarterly, and redesignate some existing requirements to conform to new format. <sup>1</sup>
142.16.....	Special primacy requirements.....	142.16.....	Unchanged.
142.17.....	Review of State programs and procedures for withdrawal of approved primacy programs.	142.12(b).....	Redesignates and retitles; adds new language to clarify EPA review for maintenance of primacy.

<sup>1</sup> This section was amended by the issuance on June 29, 1989 of the Total Coliforms Rule (54 FR 26544) and the Surface Water Treatment Rule (54 FR 27486). Today's rule redesignates this section to place the new reporting requirements from those rules in the new format specified today.

As indicated in Table 1, this action restructures the current subpart B to add a new section on revision of State programs (new § 142.12), retitles and places in a separate section the requirements for review of State programs and procedures for withdrawal of approved primacy programs (new § 142.17), incorporates revised State reporting requirements (revised § 142.15), and makes other conforming changes in the remaining sections to be consistent with the new state program revision section.

With the exception of State program revisions to adopt the revised Public Notification (PN) Regulation promulgated on October 28, 1987 (52 FR 41534) and new Volatile Organic Chemicals (VOC) Regulations promulgated on July 8, 1987 (52 FR 25690), today's revised primacy regulations will apply to all State program revisions to adopt new and revised NPDWRs submitted to EPA after the effective date of this rule. EPA is making an exception for the PN and VOC Regulations because most States have submitted their revisions and EPA stated in the preamble to the proposed primacy regulation that the new primacy regulation would not apply to State revisions to adopt previously promulgated NPDWRs. EPA is not extending this exception to the Surface Water Treatment Rule or Total Coliforms Rule (54 FR 27486 and 54 FR 27544, June 29, 1989) because no States have submitted program revisions to adopt those regulations. EPA never anticipated the exception would cover these two new rules; nor would it be reasonable to exempt these rules from the new primacy regulations, since they were promulgated only recently and States

therefore have ample opportunity to follow the new primacy regulations in adopting them. State requests for approval of program revisions to adopt the requirements of the PN and VOC Regulations are required to comply with the primacy requirements under part 142, subpart B, in effect before today's action, and with any special primacy requirements promulgated in those two rules. At their option, States may follow the procedures in these revised primacy regulations to adopt the requirements of the PN and VOC Rules, but they are not required to.

In responding to the proposed rule, a number of commenters questioned EPA's authority to promulgate revisions to the primacy regulations. A few suggested that EPA has no authority under the amended SDWA to require States to do anything more than adopt drinking water regulations "no less stringent" than the new federal NPDWRs. These assertions are unfounded. Section 1413(b)(1) of the Act explicitly authorizes EPA to prescribe by regulation the manner in which a State may apply to EPA for a determination that primacy requirements are met and the manner in which EPA makes this determination or a determination that the requirements are no longer met. It is clearly within EPA's statutory authority to revise these regulations to establish procedures ensuring that States continue to meet all primacy requirements when new or revised NPDWRs are promulgated.

In addition, some commenters expressed the opinion that a rule to revise primacy regulations is not needed. Most of these commenters believe that the existing primacy regulations, the annual program review,

and the annual grant negotiation process work well enough to meet the objective of modifying approved State primacy programs to adopt the requirements of new or revised NPDWRs. To the contrary, EPA believes there are compelling reasons to establish revision and review procedures by regulation. The amendments to the SDWA will result in program changes of unprecedented scope and magnitude; yet, the current primacy regulations are silent on the requirements and procedures for establishing and obtaining EPA approval for program changes. It is thus essential to establish by regulation clear, consistent requirements for the State/EPA revision process. These regulations will serve to ensure that States and the public are clearly informed of what is required in the process. They will also ensure that the many State revisions that will be required in the near future will be completed in an orderly, efficient and consistent manner.

#### B. New Program Requirements Under 1986 SDWA Amendments

The SDWA Amendments of 1986 greatly increased the scope and content of the PWSS Program. The amendments mandate that EPA promulgate NPDWRs for 83 drinking water contaminants by 1989, for 25 more contaminants by 1991 and for 25 additional contaminants every three years thereafter. In addition, EPA was required to promulgate NPDWRs to specify criteria under which filtration is required as a treatment technique for public water systems supplied by surface water sources and to require disinfection as a treatment technique for all public water systems



along with criteria for granting variances from the disinfection requirement. EPA also was required to revise its existing public notification procedures. The 1986 SDWA Amendments also increased the Agency's authority to enforce the NPDWRs by raising EPA's maximum civil penalty authority, eliminating the requirement that a violation be willful, and giving EPA authority to issue administrative orders and assess administrative penalties.

Table 2 summarizes EPA regulations that the States will be required to adopt to retain primacy. The list of regulations in Table 2 is subject to change as EPA proceeds to implement the 1986 SDWA Amendments.

Table 2.—Summary and Status of EPA Regulatory Actions Under the SDWA Amendments Enacted June 19, 1986

*Final Actions to Date*

VOC (52 FR 25690, July 8, 1987).  
Public Notification (52 FR 41534, October 28, 1987).  
Filtration & Disinfection of Surface Water (54 FR 27486, June 29, 1989).  
Total Coliforms (54 FR 27544, June 29, 1989).

*Proposed Actions To Date*

Lead/Copper, (53 FR 31516, August 18, 1988).  
Inorganics/Synthetic Organics, 38 contaminants (54 FR 22062, May 22, 1989).

*Additional Contaminants To Be Regulated*

Radionuclides.  
Additional Inorganics/Synthetic Organics.  
Disinfection for Groundwater/Disinfection By-products.  
1st Additional 25 Contaminants in 1991.  
Additional 25 NPDWRs in 1994 and Every Three Years Thereafter.

To retain primacy, each State with a currently approved primacy program must revise that program to incorporate new and revised NPDWRs promulgated under SDWA sections 1412 (a) and (b), new variance and exemption provisions under sections 1415 and 1416, and the revised public notification requirements promulgated under section 1414 of the SDWA. EPA has maintained a policy of approving only State programs that have adopted the full EPA program (i.e., all requirements of SDWA section 1413 and the implementing regulations in part 142). This policy was established from the beginning of the PWSS Program to avoid split accountability between EPA and the States for direct operations and to ensure that, to the extent possible, public water systems are regulated under a single regulatory scheme. This policy avoids confusion among the regulated community and the public regarding which regulations must be followed to comply with the SDWA

requirements and who has the responsibility to implement and enforce them. For the same reasons, EPA intends to continue this "full primacy" policy as it implements the 1986 SDWA Amendments.

The proposed rule maintained EPA's "full primacy" policy by setting an 18-month deadline for States to revise their approved primacy programs to adopt new and revised NPDWRs. The 18-month deadline is based on the SDWA requirement that NPDWRs become effective 18 months after promulgation by EPA. The deadline is further discussed in part IV.D. below. Although the proposal allowed extensions of the deadline for a limited period, some States may not be eligible for the extension or may be unable to adopt the new requirements by the end of the extension period and, thus, would be in violation of the primacy requirements. It is also possible that a primacy State may never agree to or be able to adopt all the new and revised requirements promulgated by EPA. EPA solicited comments on the impact of continuing the "full primacy" policy, what responsibility EPA should assume to implement and enforce new federal requirements where the State has not adopted them, and the practical implications of a program that is partially implemented by both EPA and the State.

The comments that EPA received were strongly in favor of the concept of "full primacy." However, a number of commenters were concerned that primacy requirements might become too broad and difficult with the pending promulgation of so many new and revised NPDWRs. Some suggested that if additional primacy requirements become too difficult for States to meet, EPA might want to reconsider its "full primacy" policy, to prevent the loss of good State programs. Many States indicated that their resources for drinking water programs are barely adequate to meet current program needs, and without appropriate increases in funding they will not be able to implement all of the additional requirements of the upcoming NPDWRs. These States indicated that under a "full primacy" policy they may be forced to relinquish primacy in the near future due to inadequate resources.

EPA agrees with the comments in favor of the "full primacy" concept. Partial primacy would be extremely confusing to the regulated water systems and to the public when they try to determine who is responsible for citizen complaints, inquiries, and enforcement. Redundancy in program operations (such as in laboratory

analyses, sanitary surveys, review of design and construction plans, etc.) would be inefficient and costly. For these reasons, EPA will maintain the "full primacy" policy by maintaining in the final rule a deadline for the States to revise their approved primacy programs to adopt new and revised EPA regulations.

EPA understands the State concerns regarding the number and complexity of the recently promulgated and upcoming NPDWRs, and the funding required to implement them. In this final rule, EPA is maintaining the possibility of limited extensions for States that are making good faith efforts to develop the capability to implement the new or revised NPDWRs. This signals EPA's belief that while "full primacy" is the goal, the States operating in good faith with EPA must be given every opportunity to implement new requirements and keep their primacy programs. States have the opportunity to provide comments on the burden and resource requirements imposed by new NPDWRs at the time those regulations are proposed.

Commenters also expressed concern over the transitional split primacy situation that would occur if there are States which obtain extensions to the deadline to complete specific program revisions and obtain EPA approval. These comments will be addressed in the discussion of timing and extensions in Section IV.D.

*C. Basic Requirements for State Program Revisions (§ 142.12(a))*

EPA proposed a new § 142.12 to establish the regulatory requirements, application procedures, and the EPA review and decision process for State program revisions.

Proposed § 142.12(a) required that a State submit a request for EPA approval for all revisions to its approved primacy program to adopt new or revised NPDWRs. It also required that a State notify EPA in writing of any State-initiated modifications, including modifications to State statutory or regulatory authority or program procedures that might affect the approved primacy program, and to notify EPA of a proposed re-delegation of program elements from the approved State agency to any other State agency. The proposal would also have allowed the Administrator to require State submission of materials whenever EPA had reason to believe that the State program might have changed, in the event the State failed to notify the Agency of the change.



Several groups misunderstood the proposed regulations to require States to fully reapply for primacy every time EPA promulgates a new rule. These commenters expressed concern over the burden such a system would impose. EPA does not intend, however, that a State must submit a complete description of its primacy program and reapply for primacy every time the State revises its program to incorporate the requirements of a new or revised NPDWR. The State request for EPA approval of its revisions will only need to address those elements of the approved primacy program that are changed to meet the new regulatory requirements (as well as any special primacy requirements in the specific NPDWRs). The elements of the approved primacy program are those listed in section 142.11(a) that were submitted with the initial State application and approved by EPA, and all EPA-approved program revisions thereafter. Where these elements are unchanged by the program revision request, the State need only check off the element as unchanged. This point has been clarified in the final rule at § 142.12(c)(1)(i), which now states that the request for approval shall include (among other things) "the documentation necessary to update the approved State primacy program, with identification of those elements of the approved primacy program that have not changed because of the program revision."

However, it may be necessary for the State to initially provide EPA with documents that are part of the currently approved primacy program that EPA does not possess (particularly the relevant statutes and regulations) before the State begins revising its program to incorporate new or revised NPDWRs. The State may satisfy this requirement under § 142.12 or § 142.17, whichever applies first, by providing such materials to the EPA Regional office. Subsequent submittals may reference the first, more complete update.

There were several related comments suggesting that EPA clarify the final rule to indicate that State program elements with a greater scope of coverage than the federal program requirements are not subject to federal approval. To indicate which revisions a State would have to submit to EPA for its approval, the proposal defined "State program revision" as a statutory, regulatory, or administrative change to the "approved State primacy program." In turn, the proposal defined the "approved State primacy program" as the program elements submitted with the initial State

application for primacy pursuant to § 142.11(a) and subsequently approved by EPA and any EPA-approved revisions to those elements. In other words, under the proposal, only those elements of the State drinking water program that were required to be submitted with the initial primacy application are considered part of the approved State primacy program, and only revisions to those elements are considered "State program revisions."

Many States have programs with a greater scope of coverage than required as part of an approved primacy program. Such program elements include activities such as operator certification programs, construction and operating permit programs for water treatment plants, or regulations governing contaminants for which EPA has not promulgated NPDWRs. These elements are not considered part of the approved primacy program because they have a greater scope of coverage than the primacy requirements established by EPA pursuant to the SDWA. These elements therefore will not be subject to EPA approval. EPA believes this point is made sufficiently clear by the definitions in the proposed regulations, which are retained in the final rule (although the definition of "State program revision" was revised to clarify a related matter, as noted in the following paragraph). A minor change to § 142.12(a)(1) in the final rule (which now refers to EPA approval of revisions to a State's "approved primacy program" rather than "program") clarifies this point further.

A number of commenters felt that EPA should eliminate "administrative" changes from the definition of "State program revision" and limit its review to changes in State statutes and regulations. While we have concluded that eliminating review of all administrative changes would not be appropriate, EPA agrees that certain administrative changes need not be subject to EPA approval. Specifically, EPA approval is only required for changes to those administrative programs that are part of the "approved State primacy program," as discussed above. This includes, for example, changes to administrative programs for lab certification, sanitary surveys, and system inventories, all of which are listed in § 142.11(a) among the 15 program elements that form the core of the "approved State primacy program." In contrast, the regulations are not intended to require EPA approval of administrative changes that are made for purposes other than incorporating the new or revised federal

requirements—i.e., those changes (for example, changes to agency staffing levels) that do not affect the approved State primacy program.

To clarify this point in the final rule, EPA has revised the definition of a "State program revision." Specific reference to administrative program changes, as well as statutory and judicial ones, has been eliminated. Instead, the final rule defines a "State program revision" as "a change in the approved State primacy program." In this manner, only those administrative changes that affect a State's approved primacy program will be subject to EPA approval for primacy purposes.

EPA received one comment suggesting that EPA should initially require States to rejustify their entire State PWSS program instead of applying for approval of revisions in a piecemeal fashion. EPA realizes the importance of a basic State program which is operating effectively. However, at this time, EPA is not aware of problems in the approved State primacy programs which would warrant complete program rejustification. States will be significantly revising their primacy programs over the next few years. These programs will be under intense scrutiny through EPA reviews of State program revisions, annual program and grant reviews and special EPA reviews such as the enforcement reviews recently completed. EPA believes that this close scrutiny will identify potential program deficiencies for resolution and will result in approved State primacy programs that are effective in meeting current and future primacy requirements.

One commenter stated that EPA should use an "exceptions" approach to primacy decisions and only require approval of State program revisions when EPA determines that a State is not meeting primacy requirements. EPA disagrees. It is the responsibility of the State primacy agency to inform EPA of all changes to the approved State primacy program. In particular, EPA must be informed of State plans regarding adoption of new or revised NPDWRs as soon as possible after the NPDWRs are promulgated. If the State has not adopted or does not plan to adopt a new or revised NPDWR by its effective date, EPA must be prepared to implement and enforce the new PWSS requirements at that time. Without a process for State requests for approval of revisions, EPA might not know if or when a State revised its program to adopt new or revised NPDWRs until an annual review. Therefore, in the final rule, EPA is maintaining the requirement



that a State must request EPA approval, within the deadlines in § 142.12(b), of changes to adopt the requirements of new or revised NPDWRs.

EPA did find merit, however, in several comments suggesting that notification of State-initiated changes (i.e., changes made other than to adopt new or revised EPA regulations) and transfers of State agency responsibility should be handled through the annual review process. EPA agrees that its oversight of State-initiated changes and transfers of responsibility is a routine part of EPA oversight of the State primacy program and does not require a new and separate administrative process, as was proposed. It remains important that the State notify EPA of State-initiated changes and transfers of responsibility because they may affect the State's authority or capability to implement the program. However, the Agency agrees that these notifications can be handled efficiently through the annual review process, as they are currently. EPA is therefore changing the final rule to eliminate from the new program revisions process (section 142.12) the requirement for States to notify EPA of State-initiated changes and redelegations of State agency responsibility, and to indicate in § 142.17 that notification of such changes and transfers must take place instead during the periodic review of the primacy program by the Administrator.

#### *D. Timing of State Program Revisions and Extension Process (§ 142.12(b))*

EPA proposed to add a new § 142.12(b) to require the State to submit to EPA final requests for approval of program revisions to adopt new or revised EPA regulations within 15 months of the promulgation of EPA's regulations. The proposal also required that the Administrator act on such requests within 90 days after receipt of the final and complete State request. The proposal allowed the Administrator to initiate an extension of these deadlines or approve a State request for an extension of the 15-month deadline under certain circumstances.

EPA proposed that a State may request an extension of up to two years. To obtain an extension, the proposal required the State to demonstrate that it meets one or more of the following criteria: (1) The State currently lacks the legislative or regulatory authority to enforce the new requirements or the capability to implement them; (2) the State is taking steps to adopt and implement the new provisions within its existing authority and capabilities; (3) the State is requesting the extension to group two or more program revisions in

a single legislative or regulatory action or otherwise cannot meet the original deadline in spite of a good faith effort to do so. The extension request was to include a schedule setting forth when and how the State would be able to adopt and effectively implement the new provisions.

To minimize disruptions in program administration, EPA proposed that the State implement interim measures, as they apply to the new regulations, during extension periods. As conditions to receiving an extension, the proposal required that the State do the following during the extension: inform public water systems of the new requirements and the fact that EPA would be overseeing implementation of the requirement until EPA approves the primacy program revision; collect and store laboratory results and other compliance data; conduct informal follow-up on violations and assist EPA in development of enforcement actions; provide technical assistance to public water systems; and provide EPA with all the information prescribed by § 142.15 on State reporting.

Many commenters suggested that the States should be given a full 18 months to adopt statutes or regulations and make other changes to their approved primacy program. They pointed out that in many States 15 months is not enough time to develop proposed changes, solicit comments on the drafts, have the final changes passed through the legislature or State agency, obtain an Attorney General's statement, and complete whatever other changes are necessary to the remainder of a State's approved primacy program. They believe that an 18-month period to adopt regulations and other program changes would still coincide with the SDWA requirement that NPDWRs become effective 18 months after promulgation by EPA.

EPA agrees that 15 months may not be enough time for a State to complete the changes to its regulations and the remainder of its approved primacy program. Therefore, in the final rule, the deadline in § 142.12(b) for submitting a complete and final request for EPA approval of revisions has been changed to 18 months. EPA will act on such requests within 90 days of receipt of a complete and final request.

One commenter suggested that EPA has no legal authority to grant extensions to the 18-month deadline. This commenter points to section 1412(b)(10) of the Act, which states that NPDWRs "shall take effect eighteen months after the date of their promulgation," and asserts that States

therefore must act to allow new drinking water rules to "take effect" within this 18-month period, or else they must lose primacy.

In light of this comment, EPA believes there is a need to clarify the reasons and authority behind this provision for extensions. EPA recognized, in developing this rule, the high likelihood that there will be circumstances beyond the control of States causing them not to be able to meet the 18-month period for implementing new PWS regulations. EPA has always had discretion under the Act and primacy regulations to determine when to initiate program withdrawal from States that no longer meet the requirements for primacy (see existing § 142.12(b)(2)). EPA has therefore determined that a provision for extensions would be appropriate and beneficial as a means of formalizing the criteria and priorities for initiating program withdrawal on the basis of missed deadlines. The extension process would only apply to States that exceed the 18-month deadline despite good faith efforts to comply, and would neither be automatic nor necessarily for the full period allowed. The extension provision will require States to adopt an acceptable plan and schedule for developing program capability necessary to implement the new requirements.

Consequently, in the final rule, EPA has retained the availability of extensions of up to two years. EPA's intention in adding this provision is to better define the factors EPA will consider in the exercise of its discretion to initiate withdrawal procedures. EPA has revised section 142.17(a)(2) (the provision for program withdrawal procedures, as re-numbered) to make clear that the Agency's decision to initiate withdrawal whenever it determines that a State no longer meets primacy requirements (either because a State has not adopted the requirement of new NPDWRs or for other reasons) is discretionary. Further, § 142.17(a)(2) (as revised) now makes it explicit that EPA's decision to initiate withdrawal for failure to revise a State program in a timely manner is tied to whether the State takes appropriate corrective actions under § 142.12(b)(2) by requesting an extension and negotiating with EPA the conditions the State must meet during the extension period to develop the necessary program capability and revisions. EPA is adopting this revision to § 142.17(a) without soliciting comment because it constitutes only a clarification of the Agency's discretion under the Act and



existing regulations to initiate withdrawal procedures.

A number of commenters expressed the opinion that the two-year extension is a fair and good faith signal that EPA understands State problems in rapidly promulgating program revisions, but questioned how flexible EPA would be in using the criteria to grant extensions. EPA feels that the three criteria in § 142.12(b)(2) provide States with sufficient latitude to obtain extensions when it is impossible to meet the original 18-month deadline. It must be emphasized, however, that the extensions are not meant to be automatic or necessarily for the entire two-year period. States must demonstrate a good faith effort to meet the original deadline and the reasons for extension requests must be based on at least one of the three criteria. Accordingly, EPA has revised § 142.12(b)(2) in the final rule to emphasize the importance of the "good faith effort" of the States and is maintaining the three extension criteria to provide the States flexibility in negotiating extensions based on demonstrated need.

EPA believes it is reasonable and appropriate to grant these limited extensions to States rather than to initiate withdrawal procedures when a State has not adopted new PWS laws and regulations within 18 months. Program withdrawal would be a lengthy and unnecessary process where a State is taking reasonable steps to come into compliance and would run counter to EPA's objective of working with the States to provide them with the full opportunity to implement new federal requirements and retain their programs. Moreover, during the extension period, public water systems within the State would, in any event, be subject to the new federal regulations, which would be enforced by EPA during that time.

EPA recognizes that granting extensions will result in temporary split primacy during the extension period. However, the Agency concluded that this situation is acceptable in light of its temporary nature and the need to provide limited extensions to States that otherwise have sound programs and that are making good faith efforts to come into compliance with new regulations.

Under the proposed rule, the date being extended was the date for EPA's approval of program revisions (which, under the proposal, was 18 months after EPA's promulgation of new or revised regulations). However, as noted, the final rule has been changed to allow States a full 18 months within which to submit final requests for approval of revisions, and EPA's deadline for

approving the revisions (or not) has been moved back correspondingly. Therefore, because extensions are tied to the 18-month period within which NPDWRs become effective, the first sentence of § 142.12(b)(2) in the final rule has been revised so that the date being extended is now the date that the State submits its final request.

Several commenters believed the conditions for the extension in proposed § 142.12(b)(3) were unreasonable and impractical because they require a State, during the extension period, to do everything necessary to implement new EPA rules except enforce them. They felt that States would not be able to meet these conditions for an extension because of their lack of resources and program capability.

EPA proposed the extension conditions to minimize the program confusion and disruption that could occur during the extension period and to ensure that States are involved in program operations during that period to the maximum extent that is reasonable. EPA did not intend that the States would have to be entirely capable of implementing the new or revised rules during the extension period. Neither did the Agency expect that the extension conditions listed in proposed § 142.12(b)(3) would be rigid or all necessarily complied with in every case. Rather, EPA intends that the extent of State participation in implementing the PWSS Program during the extension period can be negotiated with the Region and re-evaluated as part of the annual grant process based on State capabilities at the time. The extension schedule would indicate how the State plans to build capability during the extension. Accordingly, in the final rule, EPA has modified § 142.12(b)(3) to clarify that the conditions a State must meet during the extension period will be decided on a case-by-case basis.

#### *E. Content of a Request for EPA Approval of State Program Revisions § 142.12(c)*

EPA proposed to add a new section 142.12(c) to define the contents of a State's request for EPA approval of a revision. The proposal required that the State request must include: (1) An update to the information required in an initial application for primacy, as listed in § 142.11(a), to the extent the items listed have been changed to reflect requirements of the new EPA rules; (2) any additional materials required under future NPDWRs to be part of the State program revision request (these will be specified in § 142.16); and (3) an Attorney General's statement demonstrating that the State has

adequate legal authority under its statutes and regulations to meet all EPA requirements to carry out the program revision.

1. *Documentation Required Under § 142.11(a).* The proposal required that each program revision request update the elements included in the approved primacy program. The "approved primacy program" was defined in the proposed § 142.2 to be those elements listed in § 142.11(a): The text of the State's statutes and regulations (and a demonstration that they are no less stringent than the comparable EPA regulations); a description of the State procedures for administration and enforcement of the regulations to demonstrate that the State is implementing adequate procedures for enforcement of the program; a statement that the State will make reports and keep records as required by EPA; a copy of the State variance and exemption statutes and regulations (if any) and a demonstration that they are no less stringent than the corresponding federal laws and regulations; and a description of the State's plan for the provision of safe drinking water under emergency conditions. The proposal did not require the State to include materials listed in § 142.11(a) that are unchanged by the program revision under consideration.

A number of commenters were concerned that the proposal would require States to submit a large amount of documentation that is unnecessary, because most elements of approved primacy programs will be unaffected by primacy revisions. These commenters misunderstood the proposed rule. As indicated in Part IV.C above, the State request for EPA approval of its revisions need include only those approved primacy program documents that have been changed to reflect requirements of the new EPA rules, if an up-to-date approved primacy program (including statutes and regulations) has previously been submitted to the EPA Regional office pursuant to § 142.17(a). The final rule language at § 142.12(c)(1)(i) clarifies this point.

The final rule language of § 142.12(c)(1)(i) was also modified to require the State to include a side-by-side comparison of federal requirements and the corresponding State requirements. The requirement for a side-by-side comparison was added here because it was deleted from the requirements for an Attorney General's statement (see discussion under Part IV.E. 3 below).

2. *Additional Regulation-Specific Materials.* The proposal required that each program revision request include



any additional materials required in the individual EPA regulation that is the basis for the program revision. These additional required materials will be specified in the individual EPA regulations and will be codified in section 142.16. Currently, section 142.16 contains special primacy requirements for the revised Public Notification Rule promulgated on October 28, 1987 (52 FR 41534), the revised Total Coliforms Rule promulgated on June 29, 1989 (54 FR 27544), and the Surface Water Treatment Rule promulgated on June 29, 1989 (54 FR 27486). Special primacy requirements have also been proposed for the Lead and Copper NPDWRs (53 FR 31516, August 18, 1988) and the NPDWRs for 38 inorganics/organics (54 FR 22062, May 22, 1989).

Several commenters suggested that EPA should not specify special primacy requirements for new NPDWRs. Today's rule, however, does not address the special primacy requirements that may appear in specific NPDWRs. Comments regarding such requirements should be directed to the particular NPDWR at the time it is proposed.

3. *Attorney General's Statement.* The proposed rule required that each initial primacy application and program revision request include an Attorney General's statement demonstrating that the laws and regulations of the State provide adequate authority to carry out the program or program revision submitted to EPA for approval. This statement would demonstrate that the State statutes and regulations meet the requirements of § 142.10 as they apply to the program or program revision. The proposal required an Attorney General's statement for all State requests for approval of programs or program revisions unless EPA specifically waived the requirement in certain circumstances.

EPA also requested comment in the proposal on an alternative approach in which there would be no requirement for an Attorney General's statement to be submitted with State requests for EPA approval of programs or program revisions. Instead, the State primacy agency would submit a side-by-side comparison of the federal requirements and corresponding State statutes and regulations. After reviewing the State applications, EPA would have the opportunity to request an explanation from the Attorney General on any outstanding issues.

Some of the comments received by EPA supported the proposed requirement for an Attorney General's statement as an essential part of the primacy approval process. Many States, however, expressed strong objections to

this proposed requirement. Because all but three of the 57 States and territories have already been granted primacy, the States' comments focused on the requirement of an Attorney General's statement for program revisions rather than for initial primacy applications. The States objected primarily on the grounds that an Attorney General's statement would be an unnecessary burden and would cause delays in obtaining EPA's approval of program revisions.

The State commenters in general preferred the alternative approach discussed in the proposal. They predicted that adopting this alternative would allow States to avoid delays of up to one year that would result if they were required to submit an Attorney General statement with their program revision applications.

In light of the States' objections, EPA considered the options of reducing the scope and coverage of the Attorney General's statement or eliminating it as a requirement entirely. EPA focused on the two basic parts that the Attorney General's statement, as proposed, would need to contain in order to demonstrate that the State laws provide adequate authority to carry out the program revisions. First, the statement would certify, as a threshold matter, that the new State statutes or regulations were duly adopted and are enforceable. EPA continues to believe that having this assurance that the State will be able to enforce its laws is crucial to the Agency's primacy determination. Moreover, several States themselves pointed out that their new statutes and regulations routinely receive this type of review by their Attorney General. Therefore, EPA determined it is clearly necessary and will not be unduly burdensome or cause unnecessary delays to retain this portion of the Attorney General's statement requirement in the final rule.

The second part of the Attorney General's statement contemplated in the proposal was a demonstration of State authorities by means of citations to State statutes, regulations or ordinances, and judicial decisions (proposed §§ 142.11(a)(6) and 142.12(c)(1)(iii)). This part of the Attorney General's statement would focus on the meaning of the State laws rather than their enforceability. It would require a discussion of how the State's program meets the standards set forth in § 142.10(a). This would include a side-by-side description of how the revised State statutes and regulations are "no less stringent" than each of EPA's new national primary drinking water regulations ("NPDWRs"). Where a State has simply adopted the federal

regulations verbatim, for example, this discussion could be very brief. On the other hand, if the structure or language of State regulations differ significantly from the corresponding federal regulations, a more detailed discussion would be necessary to resolve any ambiguities over whether the State regulations are adequate.

EPA carefully considered whether to retain the requirement for a side-by-side demonstration in the Attorney General's statement in light of the significant State objections to the burden and delays it would impose. For the reasons discussed below, EPA has decided to eliminate this requirement in the final rule. Accordingly, for both initial applications for primacy and State requests for program revisions, the final rule requires only that the Attorney General statement contain a certification that the State laws and regulations were duly adopted and are enforceable. The Attorney General statement need not include a side-by-side demonstration of authorities.

Under the final rule, however, a State must nevertheless submit a side-by-side demonstration of authorities; the demonstration simply need not be prepared or signed by the Attorney General. The rule explicitly requires that a side-by-side demonstration be supplied with the initial primacy application (§ 142.11(a)(1), as redesignated). In addition, for program revisions, although the requirement for a side-by-side demonstration has been eliminated from the Attorney General statement provision (§ 142.12(c)(1)(iii)) to accommodate the States' concerns, it has been added as a requirement to § 142.12(c)(1)(i), which prescribes the documents that States must otherwise submit with their requests. EPA concluded that a side-by-side demonstration is necessary in all cases to serve as a "road map" for EPA review of State requests. This part of a State's request will be especially important in light of the large number and complexity of program revisions that States will need to adopt in the near future (see section IV.B). Of course, States are not precluded from having their Attorney General prepare these demonstrations; the Attorney General's involvement is simply no longer a requirement.

In addition, in the final rule, EPA has not altogether excluded the State Attorney General's involvement in the matters addressed in the side-by-side demonstration. As contemplated in the proposed alternative, EPA has added a provision that authorizes the Agency, on a case-by-case basis, to require further involvement by the Attorney General



where necessary to resolve primacy issues. Specifically, the new provisions (§§ 142.11(a)(6)(ii) and 142.12(c)(3)) authorize EPA, once it has reviewed the State initial primacy application or program revision request, to seek a supplemental opinion from the Attorney General addressing any issues that have been raised or unresolved by the State's initial submittal. Given the number and complexity of upcoming program revisions, EPA expects that there may be a need to request the Attorney General's opinion on select issues if EPA cannot reasonably ascertain the adequacy of State authorities without such assistance. Ultimately, then, some State Attorneys General may be significantly involved in matters concerning the adequacy of State authorities for certain rules.

EPA believes that the more limited requirements in the final rule represent an appropriate balance between the need for Attorney General involvement and the need to minimize the burden on States and avoid delays that could result from Attorney General involvement in a program where such involvement has traditionally been minimal. Requiring the States otherwise to submit a side-by-side demonstration and having the ability to involve the Attorney General on issues the Agency later identifies will ensure that EPA receives a detailed discussion of the new State laws. In response to the State concerns, this approach will allow each State the flexibility to decide who it wants to prepare the required materials and thereby will reduce the burden and disruption that could have resulted from the requirements in the proposed rule.

In addition, eliminating the requirement for a detailed Attorney General statement should shorten the times within which the States can submit their applications for program revisions, albeit delays in the EPA approval process can be expected at a later point if EPA needs to obtain a supplemental opinion from the Attorney General. EPA finds that any potential for such delays are justified by the streamlining of the process at an earlier point and consequent reduction in State burden. In sum, the Agency believes that the change from the requirements in the proposed rule to the more limited Attorney General statement in the final rule is warranted in light of the reduction in burden on the States and given that EPA ultimately will obtain the information it may need on interpretations of State law.

The Agency recognizes that the requirement adopted in today's rule is somewhat different from the

requirements for an Attorney General statement under other Agency authorities (the Clean Water Act National Pollutant Discharge Elimination System Program (40 CFR 123.23, 123.62(b)(1)), the Resource Conservation and Recovery Act Hazardous Waste Program (40 CFR 271.7, 271.21(b)(1)), and the Safe Drinking Water Act Underground Injection Control Program (40 CFR 145.24, 145.32(b)(1)). Under the PWSS Program as well as these other programs, however, EPA ultimately is able to obtain the information it needs from the State's Attorney General; the primary difference is simply one of timing. Moreover, EPA may at all times enforce its own PWSS regulations in the same manner as if the State had not received primary enforcement authority for the PWSS program. The Agency's authority to overfile and enforce the federal PWSS regulations was an important factor in its decision not to require a detailed Attorney General statement.

One commenter gave detailed reasons in support of the proposed requirement for a full Attorney General statement. This commenter noted first that requiring an Attorney General statement would help weed out legally unsound State regulations. This concern is addressed in the final rule, which requires the Attorney General to address whether the State rules are enforceable and to respond in supplemental opinions to any further issues raised by EPA. In addition, this commenter asserts that a detailed Attorney General statement would increase the efficiency of EPA's program reviews. EPA does not believe, however, that there will be an undue decrease in efficiency from the requirements in the final rule; any such decrease in efficiency and the time to ultimate EPA approval would be justified in light of the decreased burden on the States. This commenter also argues that there would be a substantial benefit to forcing the State primacy agency to work more closely with the State Attorney General's office, paving the way for more cooperation between the two offices in future enforcement efforts. While this may be true, EPA believes there are ways for States to meet this objective other than through the detailed Attorney General statement. Moreover, the more limited Attorney General statement required under today's rule may itself go far toward satisfying this goal.

A number of States commented that the requirement that an Attorney General's statement be submitted with

program revision requests would disrupt current State administrative procedures. The proposed rule permitted the statement to be signed only by the Attorney General or an "independent legal counsel," defined as an attorney having "full authority to independently represent the State primacy agency or tribe in court on all matters pertaining to the State or tribal program." The commenters requested that this definition be clarified to include other State offices that may be performing legal reviews of new State statutes and regulations.

EPA understands these concerns, but determined that no change in the definition of "independent legal counsel" was needed. This definition is essentially identical to the definitions in the regulations for the RCRA hazardous waste, NPDES, and UIC primacy programs. It serves to ensure that the Attorney General statement reflects the opinions of the State authority who will actually be enforcing the State laws.

The commenters did provide examples of existing State administrative procedures that place the responsibility for legal review of State regulations with State entities other than the Attorney General or independent legal counsel (as defined here). In no case do these other State entities act as the State's enforcement agent; however, these other State attorneys are responsible for performing functions that would support a State certification that the regulations are legally adopted and enforceable. We encourage States to use existing State procedures to avoid unnecessary, duplicative assessments to the maximum extent possible. Today's rule does not preclude the Attorney General (or "independent legal counsel") from using these existing State procedures, where appropriate, to support the certification that the Attorney General is required to make.

EPA has retained in the final rule the discretion to waive the requirement for an Attorney General's statement in certain circumstances. The final rule requires an Attorney General's statement unless the Administrator waives the requirement on a rule-by-rule basis. The waiver requirement with respect to State-initiated revisions, however, has been deleted since the rule no longer requires States to submit a separate request to EPA for approval of such revisions outside the existing annual review process.

A waiver of the Attorney General's statement will not be available for program revisions to adopt the recently promulgated Surface Water Treatment Rule and Total Coliforms Rule. These



rules require extensive program revisions; Attorney General involvement is therefore warranted. In addition, while the preamble to the proposal stated that EPA did not intend to waive the requirement for an Attorney General statement for any of the future NPDWRs, EPA has reconsidered this issue and determined that, instead, it will decide whether to waive the Attorney General requirement at the time each new or revised NPDWR is promulgated.

Also, in the final rule, the first clause in proposed § 142.11(a)(6) has been deleted since EPA deemed it unnecessary to define which applications for initial primacy would require Attorney General statements. Under the final rule, each of the few remaining possible initial applications for primacy will require an Attorney General statement.

*F. Procedures for Reviewing a Request for EPA Approval of State Program Revisions (§ 142.12(d))*

EPA proposed to add a new § 142.12(d) to establish procedures for State submission of requests for approval of program revisions and for EPA review and decision on these program revisions. Proposed § 142.12(d) also established the public notice and public hearing requirements for EPA approval or disapproval of State program revisions.

Section 142.12(d) as proposed established a two-step process for State submission and EPA review of State requests, requiring that the State first submit a preliminary request (containing a draft of the material listed in § 142.12(c)) for EPA review and tentative determination. Under the proposal, EPA's tentative determination would have been subject to public notice and the opportunity to comment (and a public hearing if requested) for revisions deemed "substantial" by the Administrator. The second step would require the State to submit a final request (containing complete and final State materials) for formal EPA approval or disapproval. The final State request would include, for example, State statutory and regulatory changes already promulgated, descriptions of any other changes to the approved State primacy program, and a signed Attorney General's statement. Under proposed § 142.12(d)(2)(iv), if EPA disapproved the revisions, EPA would notify the State that it no longer meets the requirements set forth in the rule for maintenance of primary enforcement authority. This provision also authorized EPA, in this situation, to initiate procedures leading to withdrawal of primacy.

EPA received a number of comments regarding this proposed two-step process. Certain commenters indicated that the two-step process would delay approval of State program revisions and thereby increase the need for extensions. Some of these commenters focused on the notice and opportunity for public hearing at the draft stage as a potentially significant cause of delay. In addition, some commenters asserted that it would not be possible to obtain an Attorney General's statement in 15 months.

EPA believes these comments express valid concerns over the potential for delays in the approval process. Therefore, EPA has revised the final rule to require public notice and opportunity for a hearing on the EPA determination regarding program revisions only after EPA takes action on the complete and final State request. The final rule does not provide for public notice and the opportunity to comment or request a public hearing with respect to the EPA's tentative determination on State preliminary requests for approval of revisions (which, under the final rule, are made at the State's discretion). To effect these changes, the proposed rule sections related to the public notice and hearing requirements for program revisions (§§ 142.12 (d)(1)(iii), (d)(2)(ii), and (d)(2)(v)) have been eliminated. The final rule adds the public notice and hearing requirement in § 142.12(d)(3), titled "EPA's determination on a complete and final request." In place of the separate provisions for notice, comment and hearings under the proposal, however, § 142.12(d)(3) simply incorporates the notice and hearing procedures that are already in the rule under § 142.13 for initial primacy decisions.

As noted, the proposed rule provided for public notice and participation only with respect to EPA's determination to approve or disapprove "substantial" program revisions. In the final rule, EPA has eliminated the term "substantial" and will provide public notice and opportunity to request a hearing on all § 142.12(d)(3) determinations to approve or disapprove program revisions. The Agency made this change because State requests under § 142.12 for approval of revisions are required in the final rule only for State program revisions that adopt new EPA regulations. The Agency always intended that public notice and participation on EPA's determination would be required for most such revisions. In contrast, changes deemed not to be substantial would primarily fall into the category of State-initiated

changes, which are no longer subject to the § 142.12 approval process.

In addition, to further respond to comments on potential delays in the preliminary phase of the State program revision process, the final rule has been changed to require a signed Attorney General's statement only with the State's complete and final request for approval, instead of with the preliminary request (§ 142.12(c)(1)(iii)). Also, the procedures in proposed § 142.12(d) relating to State-initiated changes (i.e., changes that do not adopt new or revised EPA regulations) are no longer applicable and have been deleted since the rule no longer requires States to seek separate approval of such changes outside the existing annual review process.

The Agency also received comments regarding EPA's review of draft materials and final submittals. Several commenters stated that a required submittal of draft materials is not always appropriate because the draft materials may not be in a form that is complete enough to merit EPA review and preliminary determination. On the other hand, other commenters stated that it would be very disruptive if EPA reviews the submittals and first raises issues only after a State has promulgated its final regulations.

EPA believes it is crucial for States to receive a full EPA review and tentative determination on a draft package before the State promulgates its rules to ensure that no issues are raised after the State has officially adopted its program changes. EPA agrees with the commenters, however, that requiring a formal preliminary State submission would not always be appropriate and should be left instead to the State's discretion. Therefore, EPA has changed the final rule to allow States the option of whether or not to submit a preliminary request. Under § 142.12(d)(1)(i), a State now "may," instead of "must," submit a request for a preliminary determination, and a State now "should," instead of "must," submit this request as soon as practicable after promulgation of the EPA regulations. In addition, minor changes to § 142.12(d)(2) were made to reflect the fact that preliminary requests are now optional. Whenever a State does submit a preliminary request, however, EPA will make a tentative determination according to § 142.12(d)(1)(ii).

States are strongly encouraged to submit a preliminary request to EPA for a tentative determination, including the draft side-by-side analysis. If they decide not to do so, and submit only a final request for approval of revisions,



they are at risk that issues may be raised after their revisions are final and EPA may be forced to disapprove the State revisions. EPA believes that this risk provides a great incentive to the States to submit draft program revisions in all cases where they are not absolutely certain that the revisions are issue-free.

#### *G. Options for Addressing Minimum State Enforcement Authorities*

The Preamble to the proposed rule included an advance notice of proposed rulemaking related to the current EPA primacy requirements for State enforcement authorities. Both the Safe Drinking Water Act and the implementing regulations at § 142.10 require a State to have adequate procedures for the enforcement of its drinking water regulations in order to obtain and maintain primary enforcement responsibility for the PWSS Program. Under § 142.10(b)(6)(vi), adequate procedures for the enforcement of drinking water regulations include authority to assess civil or criminal penalties for violation of the State's primary drinking water regulations.

The current regulations in part 142, however, do not specify any minimum penalty authority. EPA indicated that it is considering whether to amend the current primacy requirements to require States to have enforcement authorities close to or the same as EPA's enforcement authorities under the amended SDWA. The 1986 SDWA Amendments increased EPA's maximum civil penalty authority from \$5,000 to \$25,000 per day and eliminated the requirement that a violation be "willful" (section 1414(b) of the SDWA).

The 1986 SDWA Amendments also added administrative order authority to EPA's mix of enforcement tools. Section 1414(a) of the Act was amended to give EPA authority to issue administrative orders and to assess administrative penalties of up to \$5,000 if the initial administrative order is violated. Most EPA environmental programs currently have some type of administrative order and administrative penalty authority. In the PWSS Program, EPA may assess an administrative penalty only for violation of a compliance order. The States in the PWSS Program, in general, do not currently have administrative order or administrative penalty authority. EPA requested comment on whether it should require States as a condition of primacy to have, first, administrative order authority, and, second, administrative penalty authority equivalent to EPA's authority.

Commenters were divided on the need for additional State enforcement authorities. Some commenters favored minimum State penalty enforcement authority and administrative order authority. Others favored these authorities but not to the extent of forcing withdrawal of primacy if they were not adopted. Still others were opposed to these authorities for the following reasons. Some indicated that their State legislatures are unlikely to approve these authorities, thereby jeopardizing State primacy. Some viewed the imposition of such authorities as removing the State's discretion to define what actions are most appropriate for compliance. Finally, some believe that enforcement authorities alone are ineffective as enforcement tools and that the focus of EPA oversight should be on the effectiveness of a State program instead of the State penalty authorities in place.

At this time, EPA still lacks adequate information to determine what enforcement penalty authorities are most effective, whether a minimum penalty authority is appropriate, and whether administrative order authority should be required. EPA is currently researching State authorities and the effectiveness of State programs and enforcement actions which are in current use. When EPA has finished these assessments, it will determine whether minimum enforcement authorities and administrative order authorities should be required by rulemaking and will decide whether to propose such additional primacy requirements.

#### *H. Other Revisions to Current Regulations (parts 35 and 142)*

In the proposed rule, EPA amended other sections of part 142, subpart B in addition to those necessary to restructure and conform the rule language to accommodate the new section on State program revisions. EPA also proposed changes to the grant regulations in part 35. Of these changes, the following four are significant:

1. *State Adoption of BAT.* EPA proposed a revision of the primacy requirements in § 142.10(d), which relates to the variance and exemption procedures. Under the 1986 SDWA Amendments, EPA must promulgate its findings of best available technology (BAT) for the purpose of obtaining variances at the time each new or revised NPDWR is promulgated. EPA proposed to require States that allow variances to adopt requirements no less stringent than EPA's findings of BAT for use in the State's variance process.

One commenter suggested that EPA should allow States to grant variances if a system uses a control technology that is "equivalent" to EPA's finding of BAT. This commenter stated that the equivalent BAT should be allowed because not all BAT is appropriate for all conditions in all facilities.

EPA agrees that BAT may indeed be different based on individual circumstances. However, the Administrator's determination of BAT for variance purposes promulgated with each new and revised NPDWR already takes into account the different conditions that exist for particular systems. Section 1415(a)(1)(A) states that the Administrator's finding of BAT for variances "may vary depending on the number of persons served by the system or for other physical conditions related to engineering feasibility and costs of compliance \* \* \*". While EPA will seriously consider comments regarding equivalent BATs for variance purposes (and how such equivalence can be demonstrated), these comments should be addressed during the review and comment on the individual NPDWR itself.

Accordingly, for purposes of granting variances, States must adopt the BATs that EPA has identified in the individual NPDWRs (as codified in 40 CFR part 142, subpart G) and may not adopt any different technologies as BAT, unless specifically allowed under Subpart G. Because this comment revealed some confusion on this issue, EPA has revised § 142.10(d) in the final rule to clarify this point. Specifically, this subsection now provides directly that States must adopt EPA's findings of BAT for variances, rather than "provisions that are no less stringent" than EPA's findings of BAT.

2. *Revision to State Reporting Requirements.* The proposal included revisions of the current regulations at § 142.15 related to State reporting. These revisions would modify the reports which States make through the Federal Reporting Data System (FRDS). The proposal required States to submit FRDS reports to EPA every quarter. The reports would, at a minimum, contain updates of the State's inventory of public water systems, information on violations and enforcement actions, and a summary of newly granted variances and exemptions. This would revise the current rule, which only requires information to be submitted annually and does not require information on enforcement actions. The proposal also would require the State to notify EPA of any new variances and exemptions granted during the quarter. (The current rule simply requires "prompt")



notification.) This would put the variance and exemption reporting requirement on the same schedule as the other State reports. Finally, the proposal would add a new paragraph to reserve space for special reports beyond the basic reporting requirements. These special reports may be required in new NPDWRs promulgated subsequent to this rule.

One commenter suggested that the reports regarding violations should be submitted on a real time basis and that the initiation of enforcement actions should be reported immediately upon filing. The commenter further believes EPA should require States to provide EPA with the documents necessary to enable EPA to start keeping compliance files for all public water systems, in order to let EPA carry out the federal enforcement provisions of the 1988 SDWA Amendments. EPA disagrees with the commenter that quarterly reporting is not sufficient to allow EPA to properly implement its enforcement function under the SDWA. Quarterly reporting of violations and State enforcement actions is an essential component of the State/EPA enforcement agreements. It establishes a systematic process for determining when EPA independent enforcement actions are warranted, while giving States an opportunity to respond first to violations in a timely and appropriate manner. EPA also disagrees that EPA should get more information to build separate files for public water system compliance. The requirements in § 142.14 of this part for State record retention of compliance data on each PWS, and EPA's access to those State files, is sufficient.

Many States commented, on the other hand, that changing the current regulatory requirement for annual reporting to quarterly reporting was unnecessary and overly burdensome. Some commenters recommended that information be required through the annual State grant process, or be gathered through EPA on-site visits. EPA believes strongly that violation and State enforcement information is needed quarterly to effectively oversee the State programs and determine timely and appropriate federal enforcement action. Further, quarterly reporting of the violations and State enforcement actions through EPA's Federal Reporting Data System (FRDS) is the most efficient way to gather the necessary information. In fact, all States have been voluntarily submitting the quarterly violation and enforcement information through FRDS for some time. Therefore, in the final rule, EPA is maintaining the

requirement for quarterly reporting for violations, State enforcement actions, and new variances and exemptions.

Several commenters objected to the requirement for submitting to EPA information on violations of State requirements, as this would be beyond the scope of the approved State primacy program. Another commenter requested that we only require reporting of new violations and State enforcement actions that occurred during the prior quarter. EPA agrees with both of the comments and has clarified the quarterly reporting requirement in § 142.12(a) to require only submission of new violations of State regulations that adopt the EPA requirements and new State enforcement actions for violation of State regulations implementing EPA requirements taken during the previous quarter.

The other two types of information for which EPA proposed to require quarterly reports are the additions and corrections to the inventory and the summary status report on variances and exemptions. After considering the comments on the proposed rule, EPA now believes it is not critical to update this information quarterly. The final rule has been changed to allow this information to be submitted no less than annually.

EPA has moved the requirements for special reports in the Surface Water Treatment Rule and Total Coliforms Rule to new § 142.15(c). No change to the reporting requirements themselves, however, was made. The Agency expects to further amend § 142.15 in the future to add new special State reporting requirements in connection with other new NPDWRs.

**3. Program Capability Considerations.** EPA proposed to revise the current program grant regulations (40 CFR 35.410 and 35.415) and the existing primacy requirement (§ 142.10(b)) to explicitly consider program capability in the grant and primacy decision process. The proposed grant regulations required a State applying for an initial award under section 1443(a) of the Act to demonstrate that it will be capable of establishing a public water system supervision program within one year of the initial grant award. In the case of Indian Tribes, upon their agreement, at least one year of the grant funding was to be used to demonstrate program capability to implement the requirement of § 142.10. The proposed primacy regulations (§ 142.10(b)) required a State wanting to obtain or retain primacy to demonstrate that it is capable of implementing adequate procedures for the enforcement of the primacy program.

Many commenters questioned EPA's intention regarding the proposed capability requirements. Some indicated that it is unrealistic for EPA to presume that the States have the financial and personnel resources to fully implement every aspect of every drinking water regulation before EPA would approve a State's program revisions. Some also questioned whether EPA would expect such capability even if federal funding were insufficient to immediately implement all existing and new or revised requirements and suggested that program capability and performance should be negotiated through the annual program review and grant planning process only.

The capability of States to implement the large number of upcoming new federal requirements will continue to be of significant concern to EPA. EPA's intention in the proposal was that determinations of capability would be assessed on a case-by-case basis considering a State's management, technical and administrative demands. EPA agrees, however, that capability would be best addressed in the grant negotiation process, where State resources and federal funding can be taken into consideration. Therefore, the final rule retains the existing language in § 142.10(b), deleting the proposed requirement for a demonstration of capability as part of the review for primacy. The final rule also retains the existing language for the State grant regulation under 40 CFR 35.410, to respond to comments that the proposed changes to this provision were confusing and unnecessary to achieve the intent of emphasizing capability. The final rule does, however, retain the proposed addition to § 35.415 for grants awarded to Indian tribes applying for an initial primacy development grant, which is consistent with EPA's intent in administering the Indian Lands provisions of the SDWA amendments (section 1451), as implemented in the Indian primacy rule promulgated on September 26, 1988 (53 FR 37896).

**4. Emergency Plans.** EPA did not propose a change to existing § 142.11(e) (redesignated today as § 142.11(a)(5)), which requires a description of the State's plan for the provision of safe drinking water under emergency circumstances. However, EPA realized it would be helpful to indicate that emergency plans which are a part of the EPA-approved State Wellhead Protection Programs under SDWA section 1428 could be used to satisfy the PWSS emergency plan requirement as it relates to public water supplies from groundwater sources. This eliminates



the need for a duplicate plan. Therefore, in the final rule, EPA has indicated in § 142.11(a)(5) that it will accept "contingency plans" which are part of an EPA-approved State Wellhead Protection Program for the emergency plan requirement related to groundwater sources in the State primacy program. EPA is promulgating this change without seeking public comment because it is a minor change which should reduce State burden without interfering with regulatory objectives.

#### V. Compliance With Executive Order 12291

Executive Order 12291 requires that a regulatory agency determine whether a new regulation will be "major" and, if so, that the Agency conduct a Regulatory Impact Analysis. A major rule is defined as a regulation which is likely to result in:

- (1) An annual effect on the economy of \$100 million or more;
- (2) A major increase in costs or prices for consumers, individual industries, Federal agencies, State agencies, and geographical regions; or
- (3) A significant adverse effect on competition, employment, investment, production, innovation, or on the ability of United States-based enterprises to compete in domestic or export markets.

Since this rule does not meet the definition of a major regulation, the Agency has not conducted a Regulatory Impact Analysis.

The proposed rule was submitted to the Office of Management and Budget (OMB) for review as required by Executive Order 12291. Comments from OMB to EPA and any response to these comments are available for viewing in the public docket for this rule at EPA, Room 1101, East Tower, Washington, DC 20460.

#### VI. Paperwork Reduction Act

The information collection requirements (ICR) contained in this rule have been approved by the Office of Management and Budget (OMB) under the provisions of the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq.* and have been assigned OMB control number 2040-0090.

Public reporting for this collection of information is estimated to total approximately 32,400 burden hours for all States for the three years covered by the ICR. This reporting covers burden hours for States requesting approval of State program revisions to adopt new and revised NPDWRs.

A number of commenters strongly objected to the increased paperwork burden on the States to meet the proposed requirement to request EPA

approval of all State program revisions. Specific objections were to the new and separate procedure for program revisions, the new requirement for an Attorney General's statement, and the repetitive nature of submissions for each program revision.

In response to comments, the final rule now requires a separate State request for EPA approval of primacy program revisions only for State adoption of new and revised EPA regulations. Other State-initiated changes will be reviewed by EPA as part of the existing annual review process. Further, the Attorney General statement requirement was narrowed to requiring only a certification that the State rules are legally adopted and enforceable. Finally, the comment that the State request for each program revision was repetitive paperwork was a misunderstanding of the proposal, which required only that changes to the approved primacy program be submitted with each program revision. The language in the rule has been clarified to reaffirm this intent. These changes, and other streamlining actions in the final rule, reduced the paperwork burden estimated in the ICR from 42,000 burden hours to 32,400.

#### VII. Regulatory Flexibility Act

The Regulatory Flexibility Act requires that federal agencies prepare regulatory flexibility analyses assessing the impacts of proposed rules on entities such as small businesses, small organizations, and small governmental jurisdictions. Such analysis is not required, however, when the head of an agency certifies that a proposed rule would not have a significant effect on a substantial number of small entities.

Today's rule impacts States that apply for or revise programs for primary enforcement authority ("primacy") under section 1413 of the SDWA. By definition under the Regulatory Flexibility Act (5 U.S.C. 601, section 3, chapter 6), States are not small entities covered under the provisions of the Regulatory Flexibility Act. Accordingly, I certify that this rule will not have significant impact on a substantial number of small entities.

#### List of Subjects in 40 CFR Parts 35 and 142

Administrative practices and procedures, Intergovernmental relations, Reporting and recordkeeping requirements, Water supply, Indians.

Dated: November 30, 1989.

William K. Reilly,  
Administrator.

For the reasons set forth in the preamble, title 40, chapter I of the Code of Federal Regulations (CFR) is amended as follows:

#### PART 35—STATE AND LOCAL ASSISTANCE

1. The authority citation for part 35 continues to read as follows:

Authority: Secs. 105 and 301(a) of the Clean Air Act, as amended (42 U.S.C. 7405 and 7601(a)); secs. 108, 205(g), 205(j), 208, and 501(a) of the Clean Water Act, as amended (33 U.S.C. 1256, 1285(g), 1285(j), 1288, and 1361(a)); secs. 1443 and 1450 of the Safe Drinking Water Act (42 U.S.C. 300j-2 and 300j-9); secs. 2002(a) and 3011 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6912(a), 6931, 6947, 6949); and secs. 4, 23, and 25(a) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 U.S.C. 136b, 136w, and 136w(a)).

2. Section 35.415(a)(2) is revised to read as follows:

#### § 35.415 Indian tribes.

- (a) \* \* \*
- (2) The applicant has a Public Water System Supervision Program or agrees to establish one within three years of the initial award and agrees to assume primary enforcement responsibility within this period. Upon agreement by the applicant, at least one year of the grant funding will be used to demonstrate program capability to implement the requirements found in § 142.10.

\* \* \* \* \*

#### PART 142—NATIONAL PRIMARY DRINKING WATER REGULATIONS IMPLEMENTATION

1. The authority citation for part 142 is revised to read as follows:

Authority: 42 U.S.C. 300g, 300g-1, 300g-2, 300g-3, 300g-4, 300g-5, 300g-6, 300j-4, and 300j-9.

2. Section 142.2 is amended by removing the paragraph designations on the existing definitions, by placing the existing definitions in alphabetical order, and by adding, in alphabetical order, definitions for "Approved State primacy program" and "State program revision", to read as follows:

#### § 142.2 Definitions.

\* \* \* \* \*

"Approved State primacy program" consists of those program elements listed in § 142.11(a) that were submitted



with the initial State application for primary enforcement authority and approved by the EPA Administrator and all State program revisions thereafter that were approved by the EPA Administrator.

"State program revision" means a change in an approved State primacy program.

3. Section 142.10 is amended by revising the introductory paragraph and paragraphs (a) and (d), to read as follows:

**§ 142.10 Requirements for a determination of primary enforcement responsibility.**

A State has primary enforcement responsibility for public water systems in the State during any period for which the Administrator determines, based upon a submission made pursuant to § 142.11, and submission under § 142.12, that such State, pursuant to appropriate State legal authority:

(a) Has adopted drinking water regulations which are no less stringent than the national primary drinking water regulations (NPDWRs) in effect under part 141 of this chapter;

(d) If it permits variances or exemptions, or both, from the requirements of the State primary drinking water regulations, it shall do so under conditions and in a manner no less stringent than the requirements under sections 1415 and 1416 of the Act. In granting variances, the State must adopt the Administrator's findings of best available technology, treatment techniques, or other means available as specified in Subpart G of this part. (States with primary enforcement responsibility may adopt procedures different from those set forth in Subparts E and F of this part, which apply to the issuance of variances and exemptions by the Administrator in States that do not have primary enforcement responsibility, provided, that the State procedures meet the requirements of this paragraph); and

4. Section 142.11 is amended by redesignating the introductory text of the section and paragraph (a) as paragraph (a) introductory text and paragraph (a)(1), paragraph (b) introductory text and paragraphs (b)(1) through (b)(6) as paragraph (a)(2) introductory text and paragraphs (a)(2)(i) through (a)(2)(vi), and paragraphs (c) through (e) as paragraphs (a)(3) through (a)(5).

5. Section 142.11 is further amended by revising the heading and newly

redesignated paragraphs (a) introductory text and (a)(5) and by adding new paragraph (a)(6), to read as follows:

**§ 142.11 Initial determination of primary enforcement responsibility.**

(a) A State may apply to the Administrator for a determination that the State has primary enforcement responsibility for public water systems in the State pursuant to section 1413 of the Act. The application shall be as concise as possible and include a side-by-side comparison of the Federal requirements and the corresponding State authorities, including citations to the specific statutes and administrative regulations or ordinances and, wherever appropriate, judicial decisions which demonstrate adequate authority to meet the requirements of § 142.10. The following information is to be included with the State application.

(5) A brief description of the State's plan for the provision of safe drinking water under emergency conditions. NOTE: In satisfaction of this requirement, for public water supplies from groundwater sources, EPA will accept the contingency plan for providing alternate drinking water supplies that is part of a State's Wellhead Protection Program, where such program has been approved by EPA pursuant to section 1428 of the SDWA.

(6)(i) A statement by the State Attorney General (or the attorney for the State primacy agency if it has independent legal counsel) or the attorney representing the Indian tribe that certifies that the laws and regulations adopted by the State or tribal ordinances to carry out the program were duly adopted and are enforceable. State statutes and regulations cited by the State Attorney General and tribal ordinances cited by the attorney representing the Indian tribe shall be in the form of lawfully adopted State statutes and regulations or tribal ordinances at the time the certification is made and shall be fully effective by the time the program is approved by EPA. To qualify as "independent legal counsel," the attorney signing the statement required by this section shall have full authority to independently represent the State primacy agency or Indian tribe in court on all matters pertaining to the State or tribal program.

(ii) After EPA has received the documents required under paragraph (a) of this section, EPA may selectively require supplemental statements by the State Attorney General (or the attorney

for the State primacy agency if it has independent legal counsel) or the attorney representing the Indian tribe. Each supplemental statement shall address all issues concerning the adequacy of State authorities to meet the requirements of § 142.10 that have been identified by EPA after thorough examination as unresolved by the documents submitted under paragraph (a) of this section.

6. In § 142.12 paragraphs (a)(1) through (a)(3) are redesignated as § 142.11 (b)(1) through (b)(3), and in § 142.11 the newly redesignated paragraph (b)(3) is revised to read as follows:

**§ 142.11 Initial determination of primary enforcement responsibility.**

(3) When the Administrator's determination becomes effective pursuant to § 142.13, it shall continue in effect unless terminated pursuant to § 142.17.

7. Section 142.12 is revised to read as follows:

**§ 142.12 Revision of State programs.**

(a) *General requirements.* Either EPA or the primacy State may initiate actions that require the State to revise its approved State primacy program. To retain primary enforcement responsibility, States must adopt all new and revised national primary drinking water regulations promulgated in part 141 of this chapter and any other requirements specified in this part.

(1) Whenever a State revises its approved primacy program to adopt new or revised Federal regulations, the State must submit a request to the Administrator for approval of the program revision, using the procedures described in paragraphs (b), (c), and (d) of this section. The Administrator shall approve or disapprove each State request for approval of a program revision based on the requirements of the Safe Drinking Water Act and of this part.

(2) For all State program revisions not covered under § 142.12(a)(1), the review procedures outlined in § 142.17(a) shall apply.

(b) *Timing of State requests for approval of program revisions to adopt new or revised Federal regulations.* (1) Complete and final State requests for approval of program revisions to adopt new or revised EPA regulations must be submitted to the Administrator within 18 months after promulgation of the new or revised EPA regulations, unless the State requests an extension and the



Administrator has approved the request pursuant to paragraph (b)(2) of this section. If the State expects to submit a final State request for approval of a program revision to EPA more than 18 months after promulgation of the new or revised EPA regulations, the State shall request an extension of the deadline before the expiration of the 18-month period.

(2) The final date for submission of a complete and final State request for a program revision may be extended by EPA for up to a two-year period upon a written application by the State to the Administrator. In the extension application the State must demonstrate it is requesting the extension because it cannot meet the original deadline for reasons beyond its control despite a good faith effort to do so. The application must include a schedule for the submission of a final request by a certain time and provide sufficient information to demonstrate that the State:

(i)(A) Currently lacks the legislative or regulatory authority to enforce the new or revised requirements; or

(B) Currently lacks the program capability adequate to implement the new or revised requirements; or

(C) Is requesting the extension to group two or more program revisions in a single legislative or regulatory action; and

(ii) Is implementing the EPA requirements to be adopted by the State in its program revision pursuant to paragraph (b)(3) of this section within the scope of its current authority and capabilities.

(3) To be granted an extension, the State must agree with EPA to meet certain requirements during the extension period, which may include the following types of activities as determined appropriate by the Administrator on a case-by-case basis:

(i) Informing public water systems of the new EPA (and upcoming State) requirements and that EPA will be overseeing implementation of the requirements until EPA approves the State program revision;

(ii) Collecting, storing and managing laboratory results, public notices, and other compliance and operation data required by the EPA regulations;

(iii) Assisting EPA in the development of the technical aspects of enforcement actions and conducting informal follow-up on violations (telephone calls, letters, etc.);

(iv) Providing technical assistance to public water systems;

(v) Providing EPA with all information prescribed by § 142.15 of this part on State reporting; and

(vi) For States whose request for an extension is based on a current lack of program capability adequate to implement the new requirements, taking steps agreed to by EPA and the State during the extension period to remedy the deficiency.

(c) *Contents of a State request for approval of a program revision.* (1) The State request for EPA approval of a program revision shall be concise and must include:

(i) The documentation necessary (pursuant to § 142.11(a)) to update the approved State primacy program, and identification of those elements of the approved State primacy program that have not changed because of the program revision. The documentation shall include a side-by-side comparison of the Federal requirements and the corresponding State authorities, including citations to the specific statutes and administrative regulations or ordinances and, wherever appropriate, judicial decisions which demonstrate adequate authority to meet the requirements of § 142.10 as they apply to the program revision.

(ii) Any additional materials that are listed in § 142.18 of this part for a specific EPA regulation, as appropriate; and

(iii) For a complete and final State request only, unless one of the conditions listed in paragraph (c)(2) of this section are met, a statement by the State Attorney General (or the attorney for the State primacy agency if it has independent legal counsel) or the attorney representing the Indian tribe that certifies that the laws and regulations adopted by the State or tribal ordinances to carry out the program revision were duly adopted and are enforceable. State statutes and regulations cited by the State Attorney General and tribal ordinances cited by the attorney for the Indian tribe shall be in the form of lawfully adopted State statutes and regulations or tribal ordinances at the time the certification is made and shall be fully effective by the time the request for program revision is approved by EPA. To qualify as "independent legal counsel," the attorney signing the statement required by this section shall have full authority to independently represent the State primacy agency or tribe in court on all matters pertaining to the State or tribal program.

(2) An Attorney General's statement will be required as part of the State request for EPA approval of a program revision unless EPA specifically waives this requirement for a specific regulation at the time EPA promulgates the

regulation, or by later written notice from the Administrator to the State.

(3) After EPA has received the documents required under paragraph (c)(1) of this section, EPA may selectively require supplemental statements by the State Attorney General (or the attorney for the State primacy agency if it has independent legal counsel) or the attorney representing the Indian tribe. Each supplemental statement shall address all issues concerning the adequacy of State authorities to meet the requirements of § 142.10 that have been identified by EPA after thorough examination as unresolved by the documents submitted under paragraph (c)(1) of this section.

(d) *Procedures for review of a State request for approval of a program revision.*—(1) *Preliminary request.* (i) The State may submit to the Administrator for his or her review a preliminary request for approval of each program revision, containing the information listed in paragraph (c)(1) of this section, in draft form. The preliminary request does not require an Attorney General's statement in draft form, but does require draft State statutory or regulatory changes and a side-by-side comparison of State authorities with EPA requirements to demonstrate that the State program revision meets EPA requirements under § 142.10 of this part. The preliminary request should be submitted to the Administrator as soon as practicable after the promulgation of the EPA regulations.

(ii) The Administrator will review the preliminary request submitted in accordance with paragraph (d)(1)(i) of this section and make a tentative determination on the request. The Administrator will send the tentative determination and other comments or suggestions to the State for its use in developing the State's final request under paragraph (d)(2) of this section.

(2) *Final request.* The State must submit a complete and final request for approval of a program revision to the Administrator for his or her review and approval. The request must contain the information listed in paragraph (c)(1) of this section in complete and final form, in accordance with any tentative determination EPA may have issued. Complete and final State requests for program revisions shall be submitted within 18 months of the promulgation of the new or revised EPA regulations, as specified in paragraph (b) of this section.

(3) *EPA's determination on a complete and final request.* (i) The Administrator



shall act on a State's request for approval of a program revision within 90 days after determining that the State request is complete and final and shall promptly notify the State of his/her determination.

(ii) If the Administrator disapproves a final request for approval of a program revision, the Administrator will notify the State in writing. Such notification will include a statement of the reasons for disapproval.

(iii) A final determination by the Administrator on a State's request for approval of a program revision shall take effect in accordance with the public notice requirements and related procedures under § 142.13.

8. Section 142.13 is amended by revising paragraph (a) to read as follows:

**§ 142.13 Public hearing.**

(a) The Administrator shall provide an opportunity for a public hearing before a determination pursuant to § 142.11 that the State meets or does not meet the requirements for obtaining primary enforcement responsibility, or a determination pursuant to § 142.12(d)(3) to approve or disapprove a State request for approval of a program revision, or a determination pursuant to § 142.17 that a State no longer meets the requirements for primary enforcement responsibility.

9. Section 142.15(c) is revised to read as follows:

**§ 142.15 Reports by States.**

(c) *Special Reports.* \* \* \*

(1) *Surface Water Treatment Rule.*

(2) *Total Coliforms.*

10. Section 142.15 is further amended, paragraphs (b)(3) and (b)(4) are redesignated as § 142.15(c)(1)(i)(A) and (c)(1)(i)(B), paragraph (e) is redesignated as § 142.15(c)(1)(ii), and paragraph (b)(5) is redesignated as the text of § 142.15(c)(2) and the heading of § 142.15(c)(2) remains unchanged.

11. Section 142.15 paragraphs (a), (b), and (d) are revised to read as follows:

**§ 142.15 Reports by States.**

(a) Each State which has primary enforcement responsibility shall submit

quarterly reports to the Administrator on a schedule and in a format prescribed by the Administrator, consisting of the following information:

(1) New violations by public water systems in the State during the previous quarter of State regulations adopted to incorporate the requirements of national primary drinking water regulations;

(2) New enforcement actions taken by the State during the previous quarter against public water systems with respect to State regulations adopted to incorporate the requirements of national primary drinking water regulations;

(3) Notification of any new variance or exemption granted during the previous quarter. The notice shall include a statement of reasons for the granting of the variance or exemption, including documentation of the need for the variance or exemption and the finding that the granting of the variance or exemption will not result in an unreasonable risk to health. The State may use a single notification statement to report two or more similar variances or exemptions.

(b) Each State which has primary enforcement responsibility shall submit annual reports to the Administrator on a schedule and in a format prescribed by the Administrator, consisting of the following information:

(1) All additions or corrections to the State's inventory of public water systems;

(2) A summary of the status of each variance and exemption currently in effect.

(d) The reports submitted pursuant to this section shall be made available by the State to the public for inspection at one or more locations within the State.

12. New § 142.17 is added to read as follows:

**§ 142.17 Review of State programs and procedures for withdrawal of approved primacy programs.**

(a)(1) At least annually the Administrator shall review, with respect to each State determined to have primary enforcement responsibility, the compliance of the State with the requirements set forth in § 142.10 and the approved State primacy program. At the time of this review, the State shall

notify the Administrator of any State-initiated program changes (i.e., changes other than those to adopt new or revised EPA regulations), and of any transfer of all or part of its program from the approved State agency to any other State agency.

(2) When, on the basis of the Administrator's review or other available information, the Administrator determines that a State no longer meets the requirements set forth in § 142.10, and the State has failed to request or has been denied an extension under § 142.12(b)(2) of the deadlines for meeting those requirements, or has failed to take other corrective actions required by the Administrator, the Administrator may initiate proceedings to withdraw program approval. The Administrator shall notify the State in writing of EPA's intention to initiate withdrawal proceedings and shall summarize in the notice the information available that indicates that the State no longer meets such requirements.

(3) The State notified pursuant to paragraph (a)(2) of this section may, within 30 days of receiving the Administrator's notice, submit to the Administrator evidence demonstrating that the State continues to meet the requirements for primary enforcement responsibility.

(4) After reviewing the submission of the State, if any, made pursuant to paragraph (a)(3) of this section the Administrator shall either determine that the State no longer meets the requirements of § 142.10 or that the State continues to meet those requirements, and shall notify the State of his or her determination. Any determination that the State no longer meets the requirements of § 142.10 shall not become effective except as provided in § 142.13.

(b) If a State which has primary enforcement responsibility decides to relinquish that authority, it may do so by notifying the Administrator in writing of the State's decision at least 90 days before the effective date of the decision.

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# Test Retest Test Retest

Wednesday  
December 20, 1989

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## Part IV

### Department of Education

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**Graduate Assistance in Areas of National  
Need Program, Inviting Applications for  
New Awards for Fiscal Year (FY) 1990;  
Notice**



## DEPARTMENT OF EDUCATION

[CFDA No.: 84.200]

**Graduate Assistance in Areas of National Need Program; Inviting Applications for New Awards for Fiscal Year (FY) 1990**

**Note to Applicants:** This notice is a complete application package. Together with the statute authorizing the program and the Education Department General Administrative Regulations (EDGAR), the notice contains information, application forms, and instructions needed to apply for a grant under this competition.

**Purpose of Program:** To provide—through academic departments and programs of institutions of higher education—fellowships to assist graduate students of superior ability who demonstrate financial need, in order to sustain and enhance the capacity for teaching and research in areas of national need.

**Deadline for Transmittal of Applications:** January 29, 1990.

**Available Funds:** \$15,793,000.

**Estimated Range of Awards:** \$100,000–\$500,000.

**Estimated Average Size of Awards:** \$250,000.

**Estimated Number of New Awards:** 15.

**Note:** The Department is not bound by any estimates in this notice.

**Project Period:** Up to 36 months.

**Applicable Regulations:** The Education Department General Administrative Regulations (EDGAR) in 34 CFR part 74 (Administration of Grants to Institutions of Higher Education, Hospitals, and Nonprofit Organizations), 34 CFR part 75 (Direct Grant Programs), 34 CFR part 77 (Definitions that Apply to Department Regulations), 34 CFR part 85 (Government-wide Debarment and Suspension) (Nonprocurement) and Government-wide Requirements for Drug-Free Workplace (Grants)).

**Description of Program:** The Graduate Assistance in Areas of National Need Program is authorized under part D of title IX of the Higher Education Act of 1965, as amended by Public Law 99-498, the Higher Education Amendments of 1986 (20 U.S.C. 1134l–1134q).

**Eligibility:** (a)(1) Any academic department, program or unit (hereafter referred to as "academic department") of an institution of higher education, as defined in section 1201(a) of the Higher Education Act of 1965, as amended, that offers a program of post-baccalaureate study leading to a graduate degree in an area of national need as established in

the Priorities section of this notice and that has been in existence for at least four years at the time of applications is eligible to apply for a grant.

(2) An academic department, as described in paragraph (a)(1) of this section, may submit a joint application with one or more nondegree granting institutions which have formal arrangements for the support of doctoral dissertation research with degree-granting institutions. For the purposes of this program, a nondegree granting institution is any organization which—

(i) Is described in section 501(c)(3) of the Internal Revenue Code of 1954, and is exempt from tax under section 501(a) of the Code;

(ii) Is organized and operated substantially to conduct scientific and cultural research and graduate training programs;

(iii) Is not a private foundation;

(iv) Has academic personnel for instruction and counseling who meet the standards of the institution of higher education; and

(v) Has necessary research resources not otherwise readily available in the institution of higher education.

(b) An individual is eligible to receive an award from an academic department participating in this program if the individual—

(1) Has financial need, as determined under criteria developed by the institution of higher education;

(2) Has an excellent academic record in the individual's previous program or programs of study;

(3) Plans a teaching or research career;

(4) Plans to pursue the highest possible degree available in the individual's course of study; and

(5)(i) Is a citizen or national of the United States;

(ii) Is a permanent resident of the United States;

(iii) Provides evidence from the Immigration and Naturalization Service that he or she is in the United States for other than temporary purposes with the intention of becoming a citizen or permanent resident; or

(iv) Is a permanent resident of the Republic of Palau or the Commonwealth of the Northern Mariana Islands.

(c) An institution must provide assurances that it will seek talented students from traditionally underrepresented backgrounds. The Secretary suggests that applicants consider "traditionally underrepresented backgrounds" to mean minorities and other groups, including women, who historically have been underrepresented in the specific area of

graduate study for which a fellowship is awarded.

(d) The academic department of the institution of higher education is responsible for making accurate determination concerning the criterion in paragraph (b) of this section.

**Priorities:** The Secretary gives an absolute preference to applications that propose to provide fellowships in one or more of the following areas of national need: Chemistry, Engineering, Mathematics, and Physics. Under 34 CFR 75.105(c)(3), the Secretary funds under this competition only applications that meet one or more of these absolute priorities.

**Selection Procedures:** (a) Geographically balanced review panels of nationally recognized scholars will use the selection criteria to evaluate, score, and rank applications.

(b) Consistent with an allocation of awards based on quality of competing applications, an equitable geographic distribution among public and private institutions of higher education will be promoted.

**Selection Criteria:**

(a)(1) The Secretary uses the following selection criteria to evaluate applications for new grants under this competition.

(2) The maximum score for all of these criteria is 100 points.

(3) The maximum score for each criterion is indicated in parentheses.

(b) *The criteria.*—(1) *Meeting the purposes of the authorizing statute.* (30 points) The Secretary reviews each application to determine how well the project will meet the purpose of 20 U.S.C. 1134l–1134q, including consideration of—

(i) The objectives of the project; and

(ii) How the objectives of the project further the purposes of the authorizing statute.

(2) *Extent of need for the project.* (20 points) The Secretary reviews each application to determine the extent to which the project meets specific needs recognized in the statute that authorizes the program, including consideration of—

(i) The needs addressed by the project;

(ii) How the applicant identified those needs;

(iii) How those needs will be met by the project; and

(iv) The benefits to be gained by meeting those needs.

(3) *Plan of operation.* (20 points) The Secretary reviews each application to determine the quality of the plan of operation for the project, including—



(i) The quality of the design of the project;

(ii) The extent to which the plan of management is effective and ensures proper and efficient administration of the project;

(iii) How well the objectives of the project relate to the purpose of the program;

(iv) The quality of the applicant's plan to use its resources and personnel to achieve each objective;

(v) How the applicant will ensure that project participants who are otherwise eligible to participate are selected without regard to race, color, national origin, gender, age, or handicapping condition; and

(vi) For grants under a program that requires the applicant to provide an opportunity for participation of students enrolled in private schools, the quality of the applicant's plan to provide that opportunity.

(4) *Quality of key personnel.* (13 points)

(i) The Secretary reviews each application to determine the quality of key personnel the applicant plans to use on the project, including—

(A) The qualifications of the project director (if one is to be used);

(B) The qualifications of each of the other key personnel to be used in the project;

(C) The time that each person referred to in paragraph (b)(4)(i) (A) and (B) will commit to the project; and

(D) How the applicant, as part of its nondiscriminatory employment practices, will ensure that its personnel are selected for employment without regard to race, color, national origin, gender, age or handicapping condition.

(ii) To determine personnel qualifications under paragraphs (b)(4)(i) (A) and (B), the Secretary considers—

(A) Experience and training in fields related to the objectives of the project; and

(B) Any other qualifications that pertain to the quality of the project.

(5) *Budget and cost effectiveness.* (5 points) The Secretary reviews each application to determine the extent to which—

(i) The budget is adequate to support the project; and

(ii) Costs are reasonable in relation to the objectives of the project.

(6) *Evaluation plan.* (5 points) The Secretary reviews each application to determine the quality of the evaluation plan for the project, including the extent to which the applicant's methods of evaluation—

(i) Are appropriate to the project; and

(ii) To the extent possible, are objective and produce data that are quantifiable.

(Cross-reference; see 34 CFR 75.590 Evaluation by the grantee.)

(7) *Adequacy of resources.* (7 points) The Secretary reviews each application to determine the adequacy of the resources that the applicant plans to devote to the project, including facilities, equipment, and supplies.

*Funding Requirements:* (a) No grant to an academic department of an institution of higher education shall be less than \$100,000 nor greater than \$500,000 for any fiscal year.

(b) From at least 60 percent of the funds received under this program, an academic department of an institution of higher education shall, consistent with the limitations in this paragraph, make commitments to graduate students at any point of their graduate study to provide stipends for applicable expenses, except for tuition and fees, for the length of time necessary to complete the course of graduate study. Because original awards to an academic department of an institution of higher education may not be made for longer than three years, an academic department of an institution of higher education may not make a commitment to a graduate student for more than three calendar years of support under the Graduate Assistance in Areas of National Need Program.

(Note: The institution could make a commitment for more than three years using institutional funds for years beyond the first three years.) If an institution successfully competes for a new award in a subsequent competition, a student may receive additional support, but in no case shall a student receive more than five calendar years of support.

(c) The size of the stipend awarded to students each year shall be determined by the institution, except that no annual stipend award under this program may exceed \$10,000, or the demonstrated level of need, determined on the basis of criteria developed by the institution, whichever is less.

(d) From the remainder of the funds, the academic department or program may award fellowship recipients amounts to pay tuition, fees and other costs of education not included in student stipends. No grant funds may be used for the general operational overhead of the academic department.

*Matching Requirements:* An academic department must provide from non-Federal sources an amount at least equal to 25 percent of the grant. The matching funds must be used for the same purposes as the grant funds, as specified in paragraphs (a) through (d)

of the Funding Requirements section of this notice.

#### Instructions for Transmittal of Applications

(a) If an applicant wants to apply for a grant, the applicant shall—

(1) Mail the original and two copies of the application on or before the deadline date to: U.S. Department of Education, Application Control Center, Attention: (CFDA #84.200), Washington, DC 20202-4725, or

(2) Hand deliver the original and two copies of the application by 4:30 p.m. (Washington, DC time) on the deadline date to: U.S. Department of Education, Application Control Center, Attention: (CFDA #84.200), Room #3633, Regional Office Building #3, 7th and D Streets, SW., Washington, DC.

(b) An application must show one of the following as proof of mailing:

(1) A legibly dated U.S. Postal Service postmark.

(2) A legible mail receipt with the date of mailing stamped by the U.S. Postal Service.

(3) A dated shipping label, invoice, or receipt from a commercial carrier.

(4) Any other proof of mailing acceptable to the Secretary.

(c) If an application is mailed through the U.S. Postal Service, the Secretary does not accept either of the following as proof of mailing:

(1) A private metered postmark.

(2) A mail receipt that is not dated by the U.S. Postal Service.

Notes: (1) The U.S. Postal Service does not uniformly provide a date postmark. Before relying on this method, an applicant should check with its local post office.

(2) A "Grant Application Receipt Acknowledgement" will be mailed by the Application Control Center to each applicant. If you fail to receive the notification of application receipt within fifteen (15) days from the date you mailed the application, call: U.S. Department of Education, Application Control Center, (202) 732-2495.

#### Application Instructions and Forms

The appendix to this application is divided into three parts plus a statement regarding estimated public reporting burden and various assurances and certifications. These parts and additional materials are organized in the same manner that the submitted application should be organized. The parts and additional materials are as follows:

*Part I: Application for Federal Assistance (Standard Form 424 (Rev. 4-88)) and instructions.*



**Part II: Budget Information—Non-Construction Programs Budget Form and Instructions.**

**Part III: Application Narrative  
Statutory Assurances**

**Additional Materials**

Estimated Public Reporting Burden.  
Assurances—Non-Construction  
Programs (Standard Form 424B).

Certification Regarding Debarment,  
Suspension, and Other Responsibility  
Matters: Primary Covered Transactions  
(ED Form GCS-008) and Instructions.

Certification Regarding Debarment,  
Suspension, Ineligibility and Voluntary  
Exclusion: Lower Tier Covered  
Transactions (ED Form GCS-009) and

Instructions. (Note: ED Form GCS-009 is  
intended for the use of primary  
participants and should not be  
transmitted to the Department.)

One or both of the following, as  
appropriate:

Certification Regarding Drug-Free  
Workplace Requirements: Grantees  
Other than Individuals (ED 80-0004).

Certification Regarding Drug-Free  
Workplace Requirements: Grantees  
Who Are Individuals (ED 80-0005).

An applicant may submit information  
on a photostatic copy of the application  
and budget forms, the assurances, and  
the certifications. However, the  
application form, the assurances, and  
the certifications must each have an

*original signature.* No grant may be  
awarded unless a completed application  
form has been received.

**FOR FURTHER INFORMATION CONTACT:**  
Dr. Allen P. Cissell, U.S. Department of  
Education, Division of Higher Education  
Incentive Programs, 400 Maryland  
Avenue, SW., Washington, DC 20202-  
5251. Telephone: (202) 732-4415.

*Program Authority: 20 U.S.C., 11341-q.*

*Dated: December 11, 1989.*

**Roberta B. Dunn,**  
*Acting Assistant Secretary for Postsecondary  
Education.*

**Appendix**

**BILLING CODE 4000-01-M**



APPLICATION FOR  
FEDERAL ASSISTANCE

OMB Approval No. 0348-0043

1. TYPE OF SUBMISSION: Application <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction		2. DATE SUBMITTED		Applicant Identifier	
Preapplication <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		3. DATE RECEIVED BY STATE		State Application Identifier	
		4. DATE RECEIVED BY FEDERAL AGENCY		Federal Identifier	
5. APPLICANT INFORMATION					
Legal Name:			Organizational Unit:		
Address (give city, county, state, and zip code):			Name and telephone number of the person to be contacted on matters involving this application (give area code):		
6. EMPLOYER IDENTIFICATION NUMBER (EIN): [ ] [ ] - [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]			7. TYPE OF APPLICANT: (enter appropriate letter in box) <input type="checkbox"/>		
8. TYPE OF APPLICATION: <input type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es): <input type="checkbox"/> <input type="checkbox"/> A. Increase Award B. Decrease Award C. Increase Duration D. Decrease Duration Other (specify): _____			A. State H. Independent School Dist. B. County I. State Controlled Institution of Higher Learning C. Municipal J. Private University D. Township K. Indian Tribe E. Interstate L. Individual F. Intermunicipal M. Profit Organization G. Special District N. Other (Specify): _____		
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] TITLE: Graduate Assistance in Areas of National Need			9. NAME OF FEDERAL AGENCY: U. S. Department of Education		
12. AREAS AFFECTED BY PROJECT (cities, counties, states, etc.):			11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:		
13. PROPOSED PROJECT:		14. CONGRESSIONAL DISTRICTS OF:			
Start Date	Ending Date	a. Applicant			
		b. Project			
15. ESTIMATED FUNDING:		16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?			
a. Federal	\$ .00	a. YES THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE _____			
b. Applicant	\$ .00	b. NO <input type="checkbox"/> PROGRAM IS NOT COVERED BY E.O. 12372			
c. State	\$ .00	<input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW			
d. Local	\$ .00				
e. Other	\$ .00				
f. Program Income	\$ .00	17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?			
g. TOTAL	\$ .00	<input type="checkbox"/> Yes If "Yes," attach an explanation. <input type="checkbox"/> No			
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED					
a. Typed Name of Authorized Representative		b. Title		c. Telephone number	
d. Signature of Authorized Representative				e. Date Signed	

Previous Editions Not Usable

Standard Form 424 (REV 4-88)  
Prescribed by OMB Circular A-102

Authorized for Local Reproduction



## INSTRUCTIONS FOR THE SF 424

This is a standard form used by applicants as a required facesheet for preapplications and applications submitted for Federal assistance. It will be used by Federal agencies to obtain applicant certification that States which have established a review and comment procedure in response to Executive Order 12372 and have selected the program to be included in their process, have been given an opportunity to review the applicant's submission.

- | Item: | Entry:   | Item: | Entry:   |
|-------|--|-------|--|
| 1.    | Self-explanatory.  | 12.   | List only the largest political entities affected (e.g., State, counties, cities).   |
| 2.    | Date application submitted to Federal agency (or State if applicable) & applicant's control number (if applicable).  | 13.   | Self-explanatory.  |
| 3.    | State use only (if applicable).  | 14.   | List the applicant's Congressional District and any District(s) affected by the program or project.  |
| 4.    | If this application is to continue or revise an existing award, enter present Federal identifier number. If for a new project, leave blank.  | 15.   | Amount requested or to be contributed during the first funding/budget period by each contributor. Value of in-kind contributions should be included on appropriate lines as applicable. If the action will result in a dollar change to an existing award, indicate <u>only</u> the amount of the change. For decreases, enclose the amounts in parentheses. If both basic and supplemental amounts are included, show breakdown on an attached sheet. For multiple program funding, use totals and show breakdown using same categories as item 15. |
| 5.    | Legal name of applicant, name of primary organizational unit which will undertake the assistance activity, complete address of the applicant, and name and telephone number of the person to contact on matters related to this application.   | 16.   | Applicants should contact the State Single Point of Contact (SPOC) for Federal Executive Order 12372 to determine whether the application is subject to the State intergovernmental review process.  |
| 6.    | Enter Employer Identification Number (EIN) as assigned by the Internal Revenue Service.  | 17.   | This question applies to the applicant organization, not the person who signs as the authorized representative. Categories of debt include delinquent audit disallowances, loans and taxes.  |
| 7.    | Enter the appropriate letter in the space provided.  | 18.   | To be signed by the authorized representative of the applicant. A copy of the governing body's authorization for you to sign this application as official representative must be on file in the applicant's office. (Certain Federal agencies may require that this authorization be submitted as part of the application.)  |
| 8.    | Check appropriate box and enter appropriate letter(s) in the space(s) provided:<br>— "New" means a new assistance award.<br>— "Continuation" means an extension for an additional funding/budget period for a project with a projected completion date.<br>— "Revision" means any change in the Federal Government's financial obligation or contingent liability from an existing obligation. |       |  |
| 9.    | Name of Federal agency from which assistance is being requested with this application.   |       |  |
| 10.   | Use the Catalog of Federal Domestic Assistance number and title of the program under which assistance is requested.  |       |  |
| 11.   | Enter a brief descriptive title of the project. If more than one program is involved, you should append an explanation on a separate sheet. If appropriate (e.g., construction or real property projects), attach a map showing project location. For preapplications, use a separate sheet to provide a summary description of this project.  |       |  |



FORM APPROVED: 4/89  
OMB NO.: 1840-0604  
EXPIRATION DATE: 12/91

PART II

BUDGET INFORMATION

GRADUATE ASSISTANCE IN AREAS OF NATIONAL NEED

FISCAL YEAR 1990

SECTION A - SUMMARY OF FELLOWSHIPS

AREA OF APPLICATION

NUMBER OF FELLOWSHIPS REQUESTED

SECTION B - FUNDS REQUESTED AND COST SHARING

1. Federal Funds Requested for Student Stipends	\$
2. Federal Funds Requested for Tuition, Fees and Other Costs of Education Not Included in Student Stipends.	\$
3. Total Federal Funds Requested	\$
4. Non-Federal Funds	\$
Total Program Funds	\$



**Instructions for Part II—Budget Information**

Heading Information: Enter the current fiscal year. Section A—Summary of Fellowships

Enter the number of fellowships requested for area of application.

**Section B—Funds Requested and Costs Sharing**

1. Federal Funds Requested for Student Stipends: Enter the dollar amount of Federal funds requested for student stipends for applicable expenses except for tuition and fees. (At least 60% of the funds received under this program must be used to provide stipends.) See "Funding Requirements."

2. Federal Funds Requested for Tuition, Fees and Other Costs of Education Not Included in Student Stipends: Enter the dollar amount of Federal funds requested for tuition, fees and other costs of education not included in student stipends.

3. Total Federal Funds Requested: Enter the total Federal funds requested (sum of 1 and 2). Total Federal funds requested must not be less than \$100,000 nor greater than \$500,000 per year.

4. Non-Federal Funds: Enter the dollar amount of funds to be provided from other sources, e.g., state governments, local governments, private organizations, etc., which must equal at least 25 percent of the amount of Federal funds requested.

5. Total Program Funds: Enter the total program funds (sum of 3 and 4).

**Instructions for Part III—Application Narrative**

Before preparing the Application Narrative, an applicant should read carefully the information regarding priorities, and the Selection Criteria the Secretary uses to evaluate applications.

The narrative should—

1. Begin with an Abstract; that is, a summary of the proposed project;

2. Describe the current academic program and the proposed project in light of each of

the selection criteria in the order in which the criteria are listed in this application package;

3. Set forth policies and procedures to ensure that Federal funds made available under this program will be used to supplement and, to the extent practical, increase the funds that would otherwise be made available for the purpose of the program and in no case to supplant those funds;

4. Set forth policies and procedures to assure that, in making fellowship awards under this part, the institution will make awards to individuals who—

(A) Have financial need, as determined under criteria developed by the institution;

(B) Have excellent academic records in their previous programs of study;

(C) Plan teaching or research careers;

(D) Plan to pursue the highest possible degree available in their course of study; and

(E) To the extent possible, are from traditionally underrepresented backgrounds. The Secretary suggests that applicants consider that "traditionally underrepresented backgrounds" mean minorities and other groups, including women, who historically have been underrepresented in the specific area of graduate study for which a fellowship is awarded; and

5. Include any other pertinent information that might assist the Secretary in reviewing the application.

Please limit the Application Narrative to no more than 25 double-spaced, typed pages (on one side only).

**Statutory Assurances**

1. In the event that funds made available to the academic department under the program are insufficient to provide the assistance due a student under the commitment entered into between the academic department and the student, the academic department will endeavor, from any funds available to it, to fulfill the commitment to the student.

2. The applicant will ensure that no student shall receive an award except during periods

in which such student is maintaining satisfactory progress in, and devoting essentially full time to, study or research in the field in which such fellowship was awarded, or if the student is engaging in gainful employment other than part-time employment involved in teaching, research, or similar activities determined by the institution to be in support of the student's progress towards a degree.

3. The applicant will comply with the matching and funding requirements contained in the **Funding Requirements and Matching Requirements** sections of this application notice.

Signature of Authorized Certifying Official  
Title \_\_\_\_\_

Applicant Organization  
Date Submitted \_\_\_\_\_

**Estimated Public Reporting Burden**

Under terms of the Paperwork Reduction Act of 1980, as amended, and the regulations implementing that Act, the Department of Education invites comment on the public reporting burden for this collection of information. Public reporting burden for this collection of information is estimated to average five hours of response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. You may send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, Information Management and Compliance Division, Washington, DC 20202-4651; and to the Office of Management and Budget, Paperwork Reduction Project 1840-0604, Washington, DC 20503.

(Information collection approved under OMB control number 1840-0604. Expiration date: December, 1991.)

BILLING CODE 4000-01-M



OMB Approval No. 0348-0040

**ASSURANCES — NON-CONSTRUCTION PROGRAMS**

**Note:** Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§ 4728-4763) relating to prescribed standards for merit systems for programs funded under one of the nineteen statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§ 1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§ 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. § 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply with the provisions of the Hatch Act (5 U.S.C. §§ 1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§ 276a to 276a-7), the Copeland Act (40 U.S.C. § 276c and 18 U.S.C. §§ 874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 327-333), regarding labor standards for federally assisted construction subagreements.



10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§ 1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clear Air Act of 1955, as amended (42 U.S.C. § 7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended, (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§ 1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. 469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. 2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§ 4801 et seq.) which prohibits the use of lead based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act of 1984.
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	TITLE
APPLICANT ORGANIZATION	DATE SUBMITTED



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**Certification Regarding  
Debarment, Suspension, and Other Responsibility Matters  
Primary Covered Transactions**

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This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 34 CFR Part 85, Section 85.510, Participants' responsibilities. The regulations were published as Part VII of the May 26, 1988 Federal Register (pages 19160-19211). Copies of the regulations may be obtained by contacting the U.S. Department of Education, Grants and Contracts Service, 400 Maryland Avenue, S.W. (Room 3633 GSA Regional Office Building No. 3), Washington, D.C. 20202, telephone (202) 732-2505.

**(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS ON REVERSE)**

- (1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
  - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
  - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
  - (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

---

Name And Title Of Authorized Representative

---

Signature

---

Date



### Instructions for Certification

1. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
3. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.
4. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.
6. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
7. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion—Lower Tier Covered Transactions," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List (Telephone Number).
9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 6 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.



---

**Certification Regarding  
Debarment, Suspension, Ineligibility and Voluntary Exclusion  
Lower Tier Covered Transactions**

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This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 34 CFR Part 85, Section 85.510, Participants' responsibilities. The regulations were published as Part VII of the May 26, 1988 Federal Register (pages 19160-19211). Copies of the regulations may be obtained by contacting the person to which this proposal is submitted.

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS ON REVERSE)

- (1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

---

Organization Name

---

PR/Award Number or Project Name

---

Name and Title of Authorized Representative

---

Signature

---

Date



## Instructions for Certification

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
6. The prospective lower tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion—Lower Tier Covered Transactions," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.



## Certification Regarding Drug-Free Workplace Requirements Grantees Other Than Individuals

This certification is required by the regulations implementing the Drug-Free Workplace Act of 1988, 34 CFR Part 85, Subpart F. The regulations, published in the January 31, 1989 Federal Register, require certification by grantees, prior to award, that they will maintain a drug-free workplace. The certification set out below is a material representation of fact upon which reliance will be placed when the agency determines to award the grant. False certification or violation of the certification shall be grounds for suspension of payments, suspension or termination of grants, or governmentwide suspension or debarment (see 34 CFR Part 85, Sections 85.615 and 85.620).

The grantee certifies that it will provide a drug-free workplace by:

- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
- (b) Establishing a drug-free awareness program to inform employees about—
  - (1) The dangers of drug abuse in the workplace;
  - (2) The grantee's policy of maintaining a drug-free workplace;
  - (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
  - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
- (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will—
  - (1) Abide by the terms of the statement; and
  - (2) Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after such conviction;
- (e) Notifying the agency within ten days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction;
- (f) Taking one of the following actions, within 30 days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted—
  - (1) Taking appropriate personnel action against such an employee, up to and including termination; or
  - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;
- (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e) and (f).

Organization Name

PR/Award Number or Project Name

Name and Title of Authorized Representative

Signature

Date



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## Certification Regarding Drug-Free Workplace Requirements

### Grantees Who Are Individuals

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This certification is required by the regulations implementing the Drug-Free Workplace Act of 1988, 34 CFR Part 85, Subpart F. The regulations, published in the January 31, 1989 Federal Register, require certification by grantees, prior to award, that their conduct of grant activity will be drug-free. The certification set out below is a material representation of fact upon which reliance will be placed when the agency determines to award the grant. False certification or violation of the certification shall be grounds for suspension of payments, suspension or termination of grants, or governmentwide suspension or debarment (see 34 CFR Part 85, Sections 85.615 and 85.620).

The grantee certifies that, as a condition of the grant, he or she will not engage in the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance in conducting any activity with the grant.

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Organization Name (As Appropriate)

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PR/Award Number or Project Name

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Printed Name

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Signature

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Date



# Test Report

Wednesday  
December 20, 1989

## Part V

### Environmental Protection Agency

Ethylene Bisdithiocarbamates; Notice of  
Preliminary Determination to Cancel  
Certain Registrations, Notice of  
Availability of Technical Support  
Document and Draft Notice of Intent to  
Cancel



# ENVIRONMENTAL PROTECTION AGENCY

[OPP-30000/53B; FRL 3685-7]

## Ethylene Bisdithiocarbamates; Notice of Preliminary Determination to Cancel Certain Registrations, Notice of Availability of Technical Support Document and Draft Notice of Intent to Cancel

**AGENCY:** Environmental Protection Agency (EPA, the Agency).

**ACTION:** Notice of Preliminary Determination.

**SUMMARY:** This Notice sets forth EPA's preliminary determination regarding the continued registration of pesticide products containing ethylene bisdithiocarbamates (EBDCs) and sets forth the Agency's assessment of the risks and benefits associated with EBDC pesticides. This Notice announces the Agency's preliminary determination to propose cancellation of certain registrations of EBDC products and to propose modifications to those registrations which would not be cancelled. In addition, this Notice announces the availability of the EBDC Special Review Technical Support Document and the Draft Notice of Intent to Cancel. The Technical Support Document and accompanying scientific reviews constitute the technical documents in support of the proposed action.

**DATE:** Written comments must be received on or before March 20, 1990.

**ADDRESS:** Submit three copies of written comments, bearing the document control number "OPP-30000/53" by mail to: Public Docket and Freedom of Information Section, Field Operations Division (H7508C), Office of Pesticide Programs, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. In person bring comments to: Rm. 246, CM #2, 1921 Jefferson Davis Highway, Arlington, VA. Information submitted in any comment concerning this Notice may be claimed confidential by marking any part or all of that information as "Confidential Business Information" (CBI). Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. A copy of the comment that does not contain CBI must be submitted for inclusion in the public record. Information not marked CBI may be publicly disclosed by EPA without prior notice to the submitter. The EBDC docket, which contains all non-CBI written comments and the correspondence index, will be available for public inspection and copying in Rm.

246 at the Virginia address given above, from 8 a.m. to 4 p.m., Monday through Friday, excluding legal holidays.

**FOR FURTHER INFORMATION CONTACT:** By mail: Karis L. North, Special Review Branch, Special Review and Reregistration Division (H7508C), Office of Pesticide Programs, 401 M St., SW., Washington, DC 20460. Office location and telephone number: Rm. 1006, CM #2, 1921 Jefferson Davis Highway, Arlington, VA. 22202, (703-557-7400). Copies of the EBDC Technical Support Document and draft Notice of Intent to Cancel are available from the contact person at the address given above.

**SUPPLEMENTARY INFORMATION:** This Notice is organized into six units. Unit I is the Introduction and provides background information related to the EBDC pesticides and ethylenethiourea (ETU), which is a common contaminant, metabolite and degradation product of the EBDCs. The unit also gives background information concerning the initiation of the EBDC Special Review. The availability of the Technical Support Document and the draft Notice of Intent to cancel are also discussed. Unit II summarizes the risk and benefits assessments. Information related to the hazard to humans from all formulations of EBDCs and ETU and alternatives to the EBDC pesticides is also provided. Unit III contains the risk/benefit analysis and proposed regulatory decision. Procedures related to the referral to the U.S. Department of Agriculture and the Scientific Advisory Panel are discussed in Unit IV. This Notice concludes with Units V and VI summarizing the opportunity for public comment and the availability of the public docket, respectively.

### I. Introduction

#### A. Summary

EPA has reviewed the registered EBDC fungicides (maneb, mancozeb, metiram, nabam and zineb) and concluded that the risks from continued use of the EBDCs outweigh the benefits. Accordingly, the Agency is proposing to cancel many of the uses of the existing EBDCs. A sixth EBDC (amobam) was voluntarily cancelled several years ago. EPA's review included the use of EBDCs on food crops and other agricultural crops (chiefly ornamental plants), and also addresses industrial and homeowner uses. Risks result from exposure to ethylenethiourea (ETU), a common contaminant, metabolite, and degradation product of these pesticides. The EBDCs pose carcinogenic risks to consumers from dietary exposure and risks of carcinogenic, developmental

and thyroid effects to mixers, loaders, and applicators of these pesticides.

1. *Food Uses.*—a. *Background.* In determining the appropriate regulatory action, the Agency considered (1) the risks posed by the EBDCs from lifetime dietary exposure, (2) the estimated excess lifetime cancer risks resulting from exposure during the time it will take to complete the Special Review process, (3) the extent to which registered uses are supported by registrants, (4) the risks and benefits of individual uses, where appropriate, (5) the risks associated with alternative fungicides that likely would be used if EBDC registrations are cancelled, and (6) the likelihood that additional data and information might result in a different final decision.

Based on its analysis, EPA has determined that dietary risks from a lifetime of exposure are unreasonable, and therefore, the Agency proposes to cancel many of the food uses of the EBDCs. At the same time, EPA is convinced that risks from exposure during the time needed to complete the Special Review process are negligible since registrants have acted to sharply restrict pesticide usage beginning in 1990. (See Unit III.C.1.) Thus, more severe action is not necessary to protect the American public in the short-run.

To ensure that risks from short-term exposure are negligible, the Agency will proceed with certain actions to reduce exposure. These actions involve deleting uses from certain registrant labels pursuant to requests by those registrants and tolerance revocations to reduce exposure on both domestic and imported crops. In addition, EPA should be receiving additional data including monitoring data from registrants which will provide data on actual residue levels; the Agency will take further action if estimated risks during the pendency of its deliberation are unacceptable.

EPA also recognizes that the EBDC pesticides provide important benefits to consumers and the agricultural community by controlling the development of fungal diseases on crops. In addition to these benefits, the Agency believes additional data and information may show that actual exposure and hence risks are overestimated and that changes in use practices may lead to further reductions in risks. For these reasons, the Agency has required registrants to provide additional data, and strongly urges affected parties to provide other data and information to enable EPA to make the most appropriate final decision.



The Agency is interested in obtaining a variety of information and data before making a final decision on the EBDCs. Data which the Agency considers potentially very useful will be generated by a market basket survey currently being conducted by the EBDC registrants. If properly conducted, this grocery store survey will provide residue data which should more accurately characterize dietary exposure than data EPA currently possesses. The survey data are due by September 1990, and the Agency tentatively plans to issue its final decision on the EBDCs in the spring of 1991, which will allow time to fully analyze available market basket data.

While the Agency believes it is reasonable to allow sufficient time for the industry to develop market basket data, EPA does not consider it appropriate to delay proposed action until that time. EPA has tentatively planned a final decision for spring 1991. However, the Agency will not hesitate to take more immediate action if new information or data demonstrate such steps are warranted. Issuing its proposed decision now gives EPA the flexibility of issuing a final decision earlier than the spring of 1991 if appropriate. In addition, EPA believes all interested parties should have an early opportunity to evaluate EPA's analyses of risks and benefits of existing uses of these chemicals so that they may begin now to develop the most useful input to the final decisionmaking process.

The following sections provide a brief summary of EPA's proposed action concerning the EBDCs.

**b. Nabam.** The sole registrant holding registrations for agricultural uses of nabam requested voluntary cancellation of all agricultural food uses in March 1989. The Agency's acceptance of this request is imminent. Registrants holding nabam registrations on industrial sites requested voluntary cancellation of sugar beet and sugarcane transport and flume water nabam uses in 1987, but have retained the use of nabam in sugar mill grinding, crusher or diffuser systems.

**c. Zineb.** Considering the existing zineb market and apparent lack of current benefits, EPA is proposing to cancel all zineb uses. All zineb uses are currently suspended, and the only technical registrant has requested voluntary cancellation of its registrations. The Agency's acceptance of this request is imminent. EPA is in the process of determining whether any existing end use product registrant wishes to attempt to support any of the currently suspended uses.

**d. Mancozeb, Maneb and Metiram.** EPA is proposing to cancel 45 of the 55 registered uses of mancozeb, maneb and metiram. On September 6, 1989, the four major registrants of maneb, mancozeb and metiram requested EPA to delete 42 uses from their registrations. They planned to retain 13 uses. Their action would decrease estimated long-term carcinogenic risk from  $4 \times 10^{-4}$  to  $2 \times 10^{-5}$ . The 13 uses proposed to be retained by these registrants are almonds, asparagus, bananas, cranberries, figs, grapes, onions, peanuts, potatoes, sugar beets, sweet corn, tomatoes and wheat. The Agency's acceptance of this request is imminent.

Because all 55 uses remain on registrations of some formulators, the Agency must address all 55 uses in this Preliminary Determination pending final action by all maneb, mancozeb and metiram registrants. The Agency is proposing to cancel the 42 uses dropped by the technical registrants on the basis of unacceptable risk and a lack of support by the registrants. EPA believes that the action of these major registrants has altered the market sufficiently that it is appropriate to conduct a use-by-use risk/benefit analysis focused only on the use of mancozeb, maneb and metiram on the 13 crops listed above.

EPA considered the estimated dietary risk following the registrants' action and concluded that the aggregate long-term risk still was unreasonable. Therefore, EPA proposes to retain the use of mancozeb, maneb and metiram on only 10 of the 13 crops (almonds, asparagus, cranberries, figs, grapes, onions, peanuts, sugar beets, sweet corn and wheat), and proposes to cancel use on three of these crops (potatoes, tomatoes and bananas). Based on existing data, the estimated upper-bound, long-term risks resulting from the ten retained crops would be  $3 \times 10^{-6}$  and estimated benefits would be \$13 to \$26 million in producer impacts. See Table 3 for a list of crops proposed to be retained and cancelled.

**e. Dietary Exposure Data.** In calculating the estimated dietary risks which are presented in this Notice, EPA used field trial residue data resulting from use of the EBDC at maximum application rates, minimum preharvest intervals and at least the number of applications that are typically applied as long as they are within the number of applications allowed on the label. Residues were analyzed at the time of harvest. Since the Agency has indications that EBDCs are not typically applied at maximum rates, and since EBDC and ETU residues degrade from the time of harvest to the dinner plate, the residue data may tend to overstate

exposure and, thus, estimated risk. EPA believes it is possible that if more representative data were available, risk estimates could possibly be outweighed by the benefits for more crops. EPA has required EBDC registrants to generate such data. However, if these data are not submitted, or are not the product of a well conducted study, the Agency will rely on currently available residue data or other appropriate data submitted to it in making its final decision.

Commenters are urged to consider risk reduction measures short of cancellation, such as reductions in application rates or frequencies or increases in preharvest intervals, as ways of reducing exposure from particular crops. Commenters will need to provide data or other analyses to demonstrate the impact of such modifications on actual residue levels. EPA will consider this information when the Agency develops its final decision concerning the EBDCs. EPA urges interested parties to seek technical guidance from the Agency early on so that the most useful, valid data are developed.

**f. Tolerances.** Within 90 days of the issuance of this document, the Agency intends to propose tolerance revocations for the 45 food uses of maneb, mancozeb and metiram and all (58) food uses of zineb proposed for cancellation in this Preliminary Determination. The Agency presently intends to finalize the tolerance actions, reflecting consideration of public comments, when all products for particular uses are voluntarily cancelled, or the Agency issues the Final Determination, whichever occurs earlier.

**2. Worker and homeowner risks.** For commercial agriculture and industrial workers applying EBDC pesticides, EPA is proposing a requirement to wear coveralls over a long-sleeved shirt and long pants, chemical-resistant gloves, shoes, socks and goggles or a face shield. Additionally, during mixing and loading, a chemical-resistant apron must be worn. For agricultural workers, where completely enclosed cabs with positive pressure filtration, or an enclosed cockpit for aerial application are used, a long-sleeved shirt and long pants may be worn in place of the protective clothing described above. Chemical-resistant gloves must be available in the cab or cockpit and worn upon exiting. During aerial application, human flaggers are prohibited unless in totally enclosed vehicles. For most uses, these requirements reduce exposure to ETU to acceptable levels.

The Agency proposes a label language requirement that homeowners applying



EBDC pesticides wear a long-sleeved shirt and long pants and rubber gloves. Gloves must be washed thoroughly with soap and water before removing; clothes must be changed immediately after using the EBDC product and laundered separately from other laundry items before reuse. Homeowners applying EBDCs must shower immediately after use.

For a few uses including homeowner uses (i.e., maneb on homeowner vegetables, ornamentals, fruit trees, and turf sites, mancozeb on homeowner fruit trees and turf sites, maneb on grapes, maneb on commercial ornamentals, and nabam use in paper and sugar mills), no practical requirements reduce estimated risks to reasonable levels; consequently, these uses are proposed for cancellation.

#### B. The Statute

A pesticide product may be sold or distributed in the United States only if it is registered or exempt from registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) as amended (7 U.S.C. 136 et seq.). Before a product can be registered unconditionally, it must be shown that it can be used without "unreasonable adverse effects on the environment" (FIFRA section 3(c)(5)), that is, without causing "any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of the pesticide" (FIFRA section 2 (bb)). The burden of proving that a pesticide meets this standard for registration is, at all times, on the proponent of initial or continued registration. If at any time the Agency determines that a pesticide no longer meets this standard for registration, then the Administrator may cancel the registration under section 8 of FIFRA.

#### C. Regulatory Background

The ethylene bisdithiocarbamates (EBDCs) are a group of fungicides consisting of five registered pesticide active ingredients: mancozeb, maneb, metiram, nabam and zineb. A sixth EBDC fungicide, amobam, is now cancelled. The pesticide products containing EBDCs are most commonly formulated as wettable powders, flowables, dusts and concentrates. Approximately 12 to 18 million pounds of EBDCs are used in the United States annually, primarily on potatoes, apples, cucurbits, tomatoes, onions, sweet corn and small grains.

The EBDC pesticides are intended as protectants against fungal pathogens and are used on a wide variety of commercial and home garden fruit, vegetable and ornamental crops and

turf, as seed piece treatments, as soil treatments, and industrially as an antimicrobial in water cooling systems (towers and airwashers), oil well drilling rigs and in pulp, paper and sugar mills. The registrants of nabam have requested voluntary cancellation of agriculture food and feed uses and sugar beet and sugarcane transport and flume water uses.

The first use of this class of chemicals as fungicides was in 1935, when nabam was used for the control of fungal disease on tomatoes. In 1943, zinc sulfate was added to nabam suspensions to improve the fungicidal activity, and then the reaction product (zineb) became widely used to control fungal diseases on plants. The manganese salt (maneb) was developed in 1950. Since 1950, the zinc manganese complex of ethylene bisdithiocarbamates (mancozeb), the diammonium salt (amobam) and zinc ammoniates (metiram) have been developed as fungicides.

In 1986, all amobam registrants voluntarily cancelled their registrations in response to a Data Call-In Notice requiring the submission of additional data to support their product registrations.

In 1986 the zineb technical registrants cancelled their registrations. At that time, the Agency notified end use suppliers of their lack of a registered supplier. After the first notification in 1986, one end use formulator agreed to support a number of uses. All uses of zineb were suspended by the Agency in July, 1988 when that formulator failed to submit data required under FIFRA section 3(c)(2)(B). In July 1989, that formulator notified the Agency that he wanted to voluntarily cancel his registrations and the Agency issued a second notice about the lack of a registered supplier to the remaining formulators in October 1989. At the time this document was signed, no formulator had agreed to support zineb registrations. Zineb was used primarily on citrus, apples, mushrooms and pears.

Approximately 225 pesticide products containing mancozeb, maneb, metiram and nabam are federally registered. The technical materials are produced by Pennwalt Chemical Company (maneb), BASF (metiram), Rohm and Haas, Pennwalt Corporation and E.I. duPont de Nemours (mancozeb) and Alco Chemical Corporation and Vinings Chemical Corporation (nabam).

Maneb is primarily used for control of early and late blight diseases of potatoes and tomatoes and for control of scab and other fungal diseases of apples. Mancozeb is registered on 28 food crops; the major ones being apples,

grapes, potatoes, sweet corn, tomatoes and onions. The majority of metiram is applied to apples.

In March 1989, Rohm and Haas, the sole registrant holding nabam agricultural uses, requested that all their agricultural food uses be cancelled. There are no raw agricultural commodity tolerances for nabam (all expressed as zineb). Regulations have been established by the Food and Drug Administration under 21 CFR 173.320 for nabam residues following application to sugar mill grinding, crusher, and/or diffuser systems (secondary direct food additive); and under 21 CFR 176.300 for the use of nabam slimicide added to the process water for the production of paper and paperboard which will contact food (indirect food additive). Nabam is also registered for use as a biocide at several industrial sites such as in oil drilling fluids and pulp/paper and sugar mills.

On September 6, 1989, the four major registrants of maneb, mancozeb and metiram (Rohm and Haas, duPont de Nemours, Pennwalt and BASF) requested the Agency to amend their registrations to remove 42 of the 55 registered food uses. As to registrations controlled by these registrants, these registrants will label all their EBDC technical and end use materials manufactured after September 6, 1989 and all existing EBDC technical stocks and end use product stock not in the hands of growers, as of January 1, 1990 to specify for use only on food commodities as follows: maneb (almonds, bananas, potatoes, sugar beets and sweet corn), mancozeb (asparagus, bananas, cranberries, figs, grapes, onions, peanuts, potatoes, sugar beets, sweet corn, tomatoes and wheat) and metiram (potatoes).

The effect of relabeling the technical products is that it will become unlawful for downstream formulators to use these sources of technical materials in end use products labeled for use on these 42 commodities. The manufacturers have also petitioned the Agency to reduce tolerances for mancozeb on wheat, grapes, peanuts, potatoes and sugar beets. They also notified the Agency that they would not object if the Agency proposed to revoke tolerances for the above-mentioned 42 food uses. Once the registrants' action becomes final, the deleted food uses cannot be reinstated by them until such time as the Agency determines risks associated with these uses are found to be reasonable.

Once the zineb registrations are formally cancelled and the 42 food uses are formally removed from the technical registrants' mancozeb, maneb and



metiram labels, the Agency will notify the respective formulators that there is no longer a registered source of technical material for these uses. The Agency's acceptance of these requests is imminent. No use of zineb is likely to remain. If the mancozeb, maneb and metiram formulators want to retain any of the 42 uses, they must both locate an alternative source for the technical and fulfill all data requirements for that technical and the particular end use retained, including those data requirements which are presently the subject of a Data Call-In under FIFRA section 3(c)(2)(B). Failure to take these steps will result in issuance of suspension notices under FIFRA section 3(c)(2)(B). Additionally, in order to get back on the market, any currently suspended registration must be found to comply with the basis for such suspension. In summary, at this time, 55 uses of maneb, mancozeb and metiram remain legally registered by the formulators. If no one supports the 42 uses the technical registrants have deleted from their registrations, eventually only 13 uses will remain. This process to determine how many uses will remain registered may take several months.

The regulatory history of the EBDCs includes a full Special Review. The Special Review process, formerly called the Rebuttable Presumption Against Registration (RPAR), is a mechanism by which the Agency collects information on the risks and benefits associated with the uses of pesticides to determine whether any use causes unreasonable adverse effects to human health or the environment. See 40 CFR part 154. In 1977, the Agency initiated a Rebuttable Presumption Against Registration or RPAR process, based on the presumption that the EBDCs and ETU posed three potential risks to humans and/or the environment: carcinogenicity, developmental toxicity and acute toxicity to aquatic organisms. Three additional areas of concern were identified as thyroid toxicity, mutagenicity and skin sensitization.

In 1982, the Agency concluded this Special Review by issuing a Final Determination PD 4 which adopted risk reduction measures to preclude unreasonable adverse effects pending development of additional data needed to arrive at a more realistic assessment of the risks. The Agency concluded that the potential risk of acute toxicity to aquatic organisms could be reduced through the addition of a label statement warning users of a hazard to fish. Potential risks to applicators from developmental and thyroid effects could

be adequately reduced by requiring protective clothing. Potential dietary exposure resulting from consumption of EBDC-treated home grown produce was addressed by a label statement highlighting preharvest intervals on labels of home use products. The Agency also concluded that there were insufficient exposure data to reach any regulatory conclusions regarding the potential risk of carcinogenic effects to humans. Additional data were required to be submitted to address mutagenic effects. The skin sensitization effect was determined not to meet the criteria for an RPAR.

On July 17, 1987, the Agency issued a second Notice of Initiation of Special Review of the ethylene bisdithiocarbamate (EBDC) pesticides (mancozeb, maneb, metiram, nabam and zineb) because of carcinogenic, developmental and thyroid effects caused by ethylenethiourea (ETU), a common contaminant, metabolite and degradation product of these pesticides. This document, also referred to as a Position Document 1 or PD 1, detailed the basis for the Agency's decision to initiate the Special Review (52 FR 27172). The Agency had determined that registrations containing the EBDC pesticides met or exceeded the 40 CFR 154.7 (a)(2) and (a)(6) risk criteria relating to carcinogenicity to humans from dietary exposure and a risk to applicators and mixer/loaders for thyroid and developmental effects. Data available at that time led the Agency to conclude that the continued registration of EBDC products for use on certain food crops, commercial ornamentals and home garden sites, and in some industrial uses, might result in unreasonable adverse effects to humans. The Notice invited comments from the registrants as well as from the public. The comment period lasted 45 days and all rebuttal comments received during the comment period were evaluated.

Based on information received in public comments and on additional analyses performed since the Special Review process began, EPA is now issuing this Notice of Preliminary Determination. Issuance of this Notice means that the Agency has assessed the potential adverse effects and the benefits associated with the use of pesticide products containing mancozeb, maneb, metiram, nabam and zineb and that the Agency has preliminarily determined that, unless the terms and conditions of registration are modified as proposed in this Notice, the risks from mancozeb, maneb, metiram, nabam and zineb outweigh the benefits of their continued use.

EPA's position and a summary of the rationale underlying that position are set forth in this Notice. The basis for EPA's action is explained more fully in the EBDC Special Review Technical Support Document. Copies of the Technical Support Document are available upon request from the contact person listed at the beginning of this Notice. The Technical Support Document also contains references, background information and other information pertinent to the registration of pesticide products containing mancozeb, maneb, metiram, nabam and zineb.

In addition, copies of a draft Notice of Intent to Cancel EBDC products are also available from the contact person listed above. Preparation of the draft Notice of Intent to Cancel is required by 40 CFR 154.31(b)(1). This draft Notice is being forwarded to the Scientific Advisory Panel (SAP) and the Secretary of Agriculture to permit their review of the Agency's proposed action. The draft Notice of Intent to Cancel, along with the EBDC Technical Support Document and other notices and analyses prepared pursuant to 40 CFR 154.31, will be sent to all registrants and applicants for registration of pesticide products containing mancozeb, maneb, metiram, nabam and zineb. The draft Notice of Intent to Cancel is not now legally effective but is intended only to provide a basis for comment by the SAP, U.S. Department of Agriculture, registrants, and the public. The draft Notice discusses requesting a cancellation or denial hearing after issuance of a final Notice of Intent to Cancel. Comments on the Draft Notice of Intent to Cancel, this Notice and the Technical Support Document must be filed within 90 days of the issuance of this Notice.

## II. Summary of Risk and Benefit Assessments

This section contains a detailed description of the risks and the benefits involved in the use of the EBDCs. Additional information is contained in the Technical Support Document. The focus of this section is on four of the EBDCs (mancozeb, maneb, metiram and nabam) because these chemicals are presently marketable. A fifth EBDC, zineb, while registered, is currently suspended and it is unlikely that any registrant will seek to support its registration. Accordingly, EPA is not presenting in this document quantified risks and benefits of zineb.

In conducting its risk assessment, the Agency used the best data available at this time. However, the Agency recognizes that additional data could



help to refine the risk assessment and thus more accurately reflect actual risk.

A number of studies have been required under FIFRA section 3(c)(2)(B) to better characterize risk. Included are a number of toxicity and exposure studies. Studies which have been required to assess the carcinogenic potential of the EBDCs include carcinogenicity testing in both the rat and mouse for mancozeb (due June 1991), maneb (due November 1991), metiram (due June 1990) and nabam (due June 1991). Registrants are required under FIFRA section 6(a)(2) to immediately report any adverse effect observed in connection with these studies. Such reporting has already occurred for the ongoing mancozeb study.

Although not required by the Agency, new carcinogenicity studies for ETU in the rat and mouse have recently been completed by the National Toxicology Program (NTP). Some of the results of this testing have been incorporated into the risk assessment for this document; analysis of other results will be available in the near future.

The Agency has also required a number of studies to better determine the levels of EBDCs and ETU to which people are exposed through the diet. In order to better assess dietary exposure, a market basket monitoring study has been required which should provide better estimates of actual residues of parent EBDC and ETU which are consumed. The final results of this study are due in September 1990; however, interim reporting of the results of the monitoring will be provided periodically.

In order to better assess the exposure to workers applying or handling the EBDC pesticides, additional studies also have been required. Dermal absorption data for maneb and its ETU component will be submitted in May 1990. These data will be useful to calculate how much of the pesticide on the skin is absorbed into the body. Currently, the risks may be overestimated because the best available surrogate data is being used, in lieu of actual data.

The Agency has also required tank mix stability data to allow a more accurate estimate of the amount of ETU, expressed as a percent of the parent EBDC compound, in spray mixtures. These data are due in December 1989.

Worker exposure studies for some industrial uses of nabam have been required. These studies, which will measure the dermal exposure to persons handling nabam, are due in March 1990.

Finally, the Agency has required data to assess the exposures to workers entering fields treated following

treatment with EBDC pesticides. These data will be used to calculate potential risks and to set appropriate times at which workers may enter treated fields. These data are due in July 1990.

All of the above studies, with the exception of the carcinogenicity studies for the parent EBDC compounds, should be available in time for the Agency to incorporate into the final decision making process. If available, results of the carcinogenicity studies also will be considered in the final decision.

#### A. Risk Assessment

1. *Synopsis of Risk Assessment.* Exposure to the EBDCs and ETU can occur through application of the pesticides to food crops and eating foods containing residues of EBDCs and ETU. Exposure to EBDCs and ETU can also occur from application to non-food crops and from industrial application of these pesticides. The Agency does not have adequate carcinogenicity studies on any of the individual EBDCs, although these studies have been required. At the present time, the Agency does have several studies on the carcinogenicity of ETU, a contaminant, degradate and metabolite of the EBDCs. Based upon the data from these studies, the Agency has concluded that ETU meets the criteria of a Group B<sub>2</sub> carcinogen (probable human carcinogen). ETU has been shown to induce thyroid tumors in rats and thyroid and liver tumors in mice.

The EBDCs and ETU have been tested for mutagenicity in several assay systems. Evidence of mutagenicity from these studies provide supportive evidence of the carcinogenic effect. Available data demonstrate ETU's potential to cause developmental/fetotoxic effects in rats with a NOAEL (No Observable Adverse Effect Level) of 5 mg/kg/day. In addition, mancozeb has been shown to be developmentally toxic in rats and nabam to cause developmental effects in rabbits. Other studies with ETU and mancozeb have demonstrated thyroid effects (hyperplasia) in rats with a dietary LEL (Lowest Observable Effect Level) of 5 ppm of ETU.

In conjunction with determining the hazard posed by ETU, the EPA considered the dietary and mixer/loader/applicator exposures to ETU. Dietary exposure to ETU was estimated using anticipated residue data, percent crops treated data and food consumption data. Margins-of-Safety/Margins-of-Exposure (MOS/MOE) were estimated for mixer/loader/applicator exposures using the best available data, which in some cases were surrogate data for other chemicals or other use

practices. Worker exposure data for use by the Agency to make a final determination has been required in a March, 1989 Data-Call-In Notice.

Using the ETU hazard data and exposure estimates, EPA has estimated the dietary and worker exposure risks from ETU and EBDC derived ETU. The estimated long-term dietary risk from all 55 registered mancozeb, maneb and metiram food uses is  $4 \times 10^{-4}$  and the estimated dietary risk from the 13 crops proposed to be retained by the major registrants of mancozeb, maneb and metiram is  $2 \times 10^{-5}$ . If the uses of zineb were allowed to continue, the estimated dietary risk would be higher. There are also risks of concern to applicators due to carcinogenicity, and thyroid and developmental effects. Risks of concern for mixer/loaders and applicators remain after incorporation of appropriate protective clothing for: (1) Maneb use on grapes and commercial ornamentals, and on homeowner turf, fruit trees, ornamentals and vegetables, (2) mancozeb use on homeowner turf and fruit trees, and (3) nabam use in sugar and paper mills.

2. *Effects of concern—*a. *Carcinogenicity.* The carcinogenicity risk assessment process consists of four steps. In the first step, hazard identification, all relevant toxicity information is presented and a qualitative weight-of-evidence judgment is reached on the likelihood that the pesticide is a human carcinogen. In the second step, dose-response assessment, experimental data are used in conjunction with certain assumptions and a mathematical model to extrapolate the likely upper-bound of excess human cancer risk at the low dose range. The third step is exposure assessment in which human exposures via various routes and sources are estimated. Finally, in the fourth step, risk characterization, the results of the exposure and dose-response assessments are coupled to project the plausible upper-bound of the excess cancer risk under different conditions of exposures. This step also includes a summary of the strength of the qualitative evidence, plus a treatment of the uncertainties in the final assessment.

i. *Hazard identification.* Despite its comprehensive data base on ETU, the Agency currently does not have adequate carcinogenicity studies for any of the EBDC parent compounds. Earlier this year, the Agency received preliminary results of a rat carcinogenicity study on mancozeb. Once the final results have been received and evaluated they will be considered in the Agency's Final



Determination PD-4. Depending on the results of this study, adjustments to the cancer potency factor ( $Q_1^*$ ) may be necessary. Carcinogenicity studies with both the rat and mouse have been required for each of the EBDCs through Registration Standards and/or Data Call-In Notices. Metiram carcinogenicity studies are due in June 1990; mancozeb and nabam studies are due in June of 1991; and maneb studies are due in November of 1991. The registrants conducting the mancozeb carcinogenicity studies have indicated that the final study results should be available well before the June 1991 deadline, probably in time to be included in the PD 4. If any of these carcinogenicity studies indicate there are additional unacceptable risks, the Agency is prepared to take further regulatory action.

A number of studies are available to assess the carcinogenic potential of the EBDCs and ETU including five positive studies on maneb, zineb and ETU. These studies are summarized as follows. In the first study, increased numbers of lung adenomas were observed in mice fed weekly doses of maneb (500 mg/kg/body weight) by stomach tube for 8 weeks. In the second study, increased occurrence of lung adenomas were observed in mice fed weekly doses of zineb (3500 mg/kg/body weight) by stomach tube for 8 weeks. When weekly doses of zineb were reduced to 1750 mg/kg/body weight but continued for 11 weeks, lung adenomas were again observed in treated animals but not in control groups. In a third study, marked increases in liver tumors (hepatomas) were observed in mice fed single daily doses of ETU (646 ppm) for over 80 weeks. In the fourth study, rats fed two different doses of ETU (350 or 175 ppm) daily for 18 months developed thyroid carcinomas at both dose levels. No thyroid tumors developed in controls. In the fifth study, thyroid effects were observed in rats fed ETU at doses of 500, 250, 25 or 5 ppm for nearly 2 years. A dose-related increase in thyroid follicular cell carcinomas and adenocarcinomas was observed at 500 and 250 ppm; thyroid follicular cell adenomas at 250 ppm; and thyroid follicular cell hyperplasia at 250, 125, 25 and 5 ppm.

Several deficiencies in the two mouse studies on maneb and zineb discussed above make the studies unreliable for use in a quantitative risk assessment and in reaching any conclusions regarding the potential for EBDCs to cause carcinogenic effects to humans.

The three ETU carcinogenicity studies discussed above, when considered

separately, do not meet current test standards for the evaluation of carcinogenicity, but are adequate when considered collectively along with the results from the new NTP studies and with other ancillary information to conclude that ETU is carcinogenic in rats and mice.

Recently, the National Toxicology Program (NTP) made data available on ETU in studies conducted in rats and mice. These studies were of an unusually complex design when compared with the usual NTP carcinogenicity bioassay. Besides including treatment groups which received the traditional pattern of exposure (beginning at about 8 weeks of age and continuing until the end of the experiment at 2 years), there also were treatment groups in which animals were exposed *in utero*, essentially from the moment of conception, continuing throughout their lifetimes. While preliminary evaluation of data from these additional exposure scenarios indicate tumor responses somewhat different from those seen in the standard treatment groups, only data from the standard treatment groups have been used in this current risk assessment since the remaining data are still under review. It is anticipated that all of the data from this complex exposure paradigm will be evaluated thoroughly in the next few months. This evaluation will be incorporated into the final risk assessment which will accompany the final regulatory decision on the EBDCs.

In the mouse study using the standard protocol, animals were fed doses of 0, 333 or 1000 ppm ETU in the diet for up to 2 years. The results were as follows: In the female mice, treated at the low dose, 30 percent of the animals exhibited liver adenomas only while an additional 58 percent showed liver carcinomas for a combined total of 88 percent. At the high dose, only 2 percent exhibited adenomas while 96 percent were diagnosed with carcinomas. This contrasts sharply with a total of only 8 percent of the females in the control group exhibiting either adenomas (4 percent) or carcinomas (4 percent). These data for the female liver tumors provided the basis for the preliminary carcinogenic potency factor ( $Q_1^*$ ) used in the risk assessment for this preliminary determination. Males also showed dose-related effects in the liver. Although the incidences of liver adenomas (16 percent) and carcinomas (30 percent) (total of 47 percent of animals with tumors) was obviously higher in male than female controls, the treated males showed significantly higher tumor rates when compared against their concurrent controls.

Virtually all males exhibited tumors at the high dose (2 percent with adenomas, 98 percent of them with carcinomas) while a total of 68 percent of the males at the low dose had tumors (adenomas = 28 percent; carcinomas = 40 percent). Centrilobular cytomegaly (scattered giant cells in the area of the central portion of the liver lobe which are generally recognized as potential precursors to carcinogenicity) was evident in both treated groups of both sexes but not observed in the controls. Cellular necrosis was not observed in any group. The thyroid gland in female mice showed dose related increases in follicular cell hyperplasia when compared to controls (4 percent, 26 percent, 94 percent). Male mice showed follicular cell hyperplasia only at the high dose tested (0 percent, 0 percent, 88 percent). Female mice showed statistically significant increases in follicular cell multiple adenomas and carcinomas at the high dose only. No thyroid carcinomas or adenomas were observed in controls. In males, follicular cell adenomas and carcinomas appeared to a greater extent in the high dose group total (62 percent) than in controls (2 percent) or the low dose group (2 percent).

In the new NTP bioassay conducted on rats, the thyroid gland was the principal target organ for ETU. Animals were fed ETU in their diet at levels of 0, 83 or 250 ppm for up to 2 years. Hyperplasia ranged between 0 to 9 percent for control groups, whereas hyperplasia in all treated groups was between 18 and 64 percent. Follicular cell adenocarcinomas occurred in 58 percent of the high dose group of males compared to 2 percent in controls. In females, it was 16 percent for adenocarcinomas at the high dose compared with 4 percent for controls.

ii. *Mutagenicity.* ETU and the EBDCs have been tested for mutagenicity in several assay systems. Although the results of the available studies were both positive and negative, the body of evidence for ETU and EBDC suggests that they are capable of inducing a variety of genotoxic endpoints. These include responses in gene mutation assays, structural chromosomal assays, and other genotoxic effects. Published studies add additional information to support a mutagenic concern.

A major consideration that should be taken into account when examining the genotoxicity of ETU is the magnitude of the positive responses. While ETU induces a variety of genotoxic endpoints, it does not appear to be a relatively potent genotoxic agent. Since ETU does not appear to be very potent,



and is not extremely toxic to test cells and organisms, it is not surprising to find that ETU does not induce effects in many of the assays reviewed. Therefore, in many instances, positive and negative results in the same assay are reported from different investigators, but these results may be dependent upon the test conditions in each individual laboratory. Often there are problems with many of the negative assays in protocol or reporting and in many studies the concentration levels are not high enough for an adequate test.

An additional concern for ETU may be the aspect of nitrosation of ETU. There are suggestions that ureas (such as ethylenethioureas) can be nitrosated with sodium nitrite at appropriate acidities. Many ethylene bisdithiocarbamate-treated products are cooked and eaten. With ETU as a metabolite along with a contaminant as a nitrosating source, humans could be exposed to conditions where nitrosation in the stomach may occur. Nitrosated ETU and ETU in combination with sodium nitrite have been demonstrated to induce potent genotoxic effects in gene mutation assays and *in vivo* micronucleus and chromosomal aberration assays. Therefore, this aspect of ETU genotoxicity should be a concern if humans are exposed to ETU above certain amounts.

In many instances, the induced genotoxic effects by the EBDCs are not particularly striking; however, in some instances, the response is significantly large. Also, there is no single assay where all the EBDCs provide consistently elevated and substantial positive responses. This demonstrates that these compounds apparently are not consistent in their genetic activity with many negative results found in addition to the positive results. An in depth examination is necessary to ascertain their potential genotoxicity. Of the five EBDCs tested, mancozeb induced a larger number of positive effects that would provide the most evidence among the EBDCs for a mutagenicity concern. (It should be noted that mancozeb had more test results available than the other EBDCs.) Overall, therefore, it appears that the EBDCs do present a genotoxicity concern with each of the individual compounds inducing enough of a variety of genetic effects to elicit such a concern.

It is well recognized that a correlation exists between genotoxic agents and carcinogenicity in that many, but not all, mutagenic agents contribute to or induce tumor formation. Experimental evidence has shown that ETU is capable of

altering DNA in a variety of test systems. ETU has been shown to produce thyroid tumors in the rat and liver and thyroid tumors in the mouse. It can, therefore, be said that the positive mutagenicity findings provide general support for the carcinogenic observations of ETU in both rats and mice. However, if it can be shown that the positive results in these mutagenicity studies have no direct relevance to the initiation of thyroid tumors in the rat, one might argue that the thyroid tumors in the rat may be the result of a positive physiological feedback mechanism resulting from the inhibition of thyroid hormone production. If only thyroid tumors were observed following exposure to these substances, valid evidence supporting a hormonally based mechanism of activity might lead the Agency to modify the way it views the carcinogenic potential of ethylenethiourea and introduce the concept of threshold into the quantification of carcinogenic risk. However, these chemicals also induce liver tumors and no supportable or adequate scientific argument has been put forth to persuade the Agency to alter its current policy for the quantitative assessment of this endpoint.

iii. *Non-Genotoxic Tumor Formation (Threshold Concept).* The physiological relationship between the pituitary gland and thyroid gland is well known. Decreased levels of thyroid hormones which threaten homeostasis results in the enhanced secretion of thyroid stimulating hormone (TSH) from the anterior pituitary with a subsequent rise in thyroid hormone levels. The return of thyroid hormone levels to acceptable levels results in a negative feedback mechanism with decreased levels of thyroid stimulating hormone being secreted by the anterior pituitary and a subsequent decrease in the production of thyroid hormone. An imbalance in this relationship where decreased thyroid hormone levels cannot be compensated for results in the chronic stimulation of the thyroid with attendant changes in thyroid gland morphology (follicular cell neoplasia). This positive feed-back mechanism is well documented and can be induced experimentally by a variety of proven means. Thyroid gland follicular cell neoplasia has been experimentally induced by low iodine diets, subtotal thyroidectomy, intrasplenic transplants of thyroid tissue and transplantation of anterior pituitary tumors producing thyroid stimulating hormone. Ethylenethiourea (ETU) has been demonstrated to inhibit iodide peroxidase *in vitro* and may have the

same effect on the thyroid gland *in vivo*. Iodide peroxidase catalyzes the iodination of tyrosine and the coupling of the resultant iodotyrosyl residues to produce the active thyroid hormones. Thus, ETU interferes with the biosynthesis of thyroid hormones by inhibiting iodide peroxidase with the resultant effect of positive feedback to the pituitary for as long as is sufficient to maintain decreased thyroid hormone levels. In animal experiments, ETU induces thyroid tumors under test conditions of chronic administration and adequate dosing. The argument can therefore be advanced that at dose levels of ETU that do not interfere with iodide peroxidase or interfere with it at some non-critical level, ETU should not cause thyroid tumors since the dose of ETU will be at a level below which an exacerbated positive feedback would not occur. This argument has been presented to the Agency's FIFRA Scientific Advisory Panel and the Science Advisory Board. Each has given its cautious approval to this approach. Although the approach has been sanctioned, the threshold concept itself is still being considered by the Agency and will be presented to the FIFRA Scientific Advisory Panel in 1990.

iv. *Summary of ETU metabolic and pharmacokinetic properties.* Animal metabolism of the EBDCs is rapid; ETU and ethylene bisdiisothiocyanato sulfide (EBIS) are major metabolites. ETU may be formed by diverse pathways from the parent compounds and may be further metabolized giving rise to several byproducts, not all of which are characterized.

v. *Structure-activity-relationships.* The common EBDC degradate and metabolite ETU is structurally related to the EBDCs and several other thyroid inhibitors. Chronic studies on thiourea have shown that it induces hepatomas and thyroid enlargement in rats. Methimazole, propylthiouracil and thiouracil all induce thyroid tumors in rats. Propylthiouracil also induces thyroid tumors in hamsters and guinea pigs and pituitary adenomas in mice. Thiouracil induces hepatomas and thyroid tumors in mice.

vi. *Human studies.* The Agency is not aware of any valid human epidemiology studies which evaluate exposure to ETU or any of the EBDCs.

vii. *Weight-of-evidence for carcinogenicity.* The Agency considers the following facts regarding the toxicology data on ETU to be important in the weight-of-evidence determination of the carcinogenic potential of ETU.

(1) ETU has been shown to induce liver tumors (single and multiple



adenomas and carcinomas) in mice and thyroid tumors (hyperplasia and follicular cell adenomas and carcinomas) in mice and rats. Pituitary adenomas were also increased in female mice.

(2) Exposure to ETU has yielded both positive and negative results in a variety of mutagenicity studies. However, there is enough of a mutagenicity concern to provide supportive evidence of the carcinogenic effect.

Nabam, metiram, maneb and mancozeb also have been shown to be positive in a number of mutagenicity studies.

(3) ETU is structurally related to, and a degradate and metabolite of, the EEDCs. Maneb and zineb have been shown to cause carcinogenic effects (lung adenomas) in mice; however, the results of these studies were considered inconclusive due to faulty study design and considered unreliable for use in a quantitative risk assessment. The Agency now has preliminary information submitted under FIFRA section 6(a)(2) on mancozeb. Evaluation of thyroid tissues from rats indicates that, at the high dose (750 ppm) tested, there is a statistically significant increase in follicular cell adenomas and carcinomas in male rats and a statistically significant increase in females when follicular cell adenomas and carcinomas are combined. The incidence of follicular cell lesions in all other groups appear comparable to control values.

(4) ETU is also structurally similar to thiourea, methimazole, propylthiouracil and thiouracil. Thiourea and thiouracil induce hepatomas in rats and mice, respectively. Methimazole, propylthiouracil and thiouracil all induce thyroid tumors in rats. Propylthiouracil also induces pituitary adenomas in mice.

viii. *Dose response.* The Agency concludes, based upon the available evidence, that ETU meets the criteria of a Group B<sub>2</sub> Carcinogen (probable human carcinogen), according to its Guidelines for Carcinogen Risk Assessment. This classification is based on evidence that ETU induced an increased incidence of thyroid follicular cell adenomas and adenocarcinomas in mice and two strains of rats (three separate studies) and of liver adenomas and carcinomas in three strains of mice. ETU induced thyroid tumors in rats after 1 year or less of treatment. It also induced a high incidence of both thyroid tumors in rats and hepatomas in mice to an unusual degree in a single experiment.

This classification is also supported by positive structure-activity data since ETU and several other thyroid inhibitors

(e.g., thiouracil and thiourea) have been found to induce liver and/or thyroid tumors in rodents. Results of the available mutagenicity studies on ETU also provide supportive evidence of the carcinogenic effect.

While the Agency agrees that most of the ETU carcinogenicity studies considered were not carried out in strict accordance with current Guidelines for Carcinogen Risk Assessment studies, it considers the studies collectively to be adequate to conclude that ETU is carcinogenic to rats and mice due to the magnitude of the dose-response seen.

ix. *Determination of Carcinogen Potency Factor (Q<sub>1</sub><sup>\*</sup>) for Risk Calculations.* The original Q<sub>1</sub><sup>\*</sup> for ETU was derived by the Agency's Cancer Assessment Group (CAG) from a mouse study. It was calculated to be 0.14 (mg/kg/day)<sup>-1</sup>. At that time, it was chosen over other possible outcomes because it gave the highest Q<sub>1</sub><sup>\*</sup>. The new preliminary Q<sub>1</sub><sup>\*</sup> [0.6 (mg/kg/day)<sup>-1</sup>] which is being used in this document to calculate risks is based on data on female mouse liver tumors observed in the new NTP study on ETU. Although NTP data on the rat thyroid were made available to the Agency to calculate a new Q<sub>1</sub><sup>\*</sup>, the mouse data were chosen because they provided a slightly higher potency factor.

As stated earlier, the new NTP studies included a number of unique exposure scenarios. Data associated with the *in utero* exposure will be reviewed to determine if these data would provide a more valid basis from which to derive a quantitative estimate of hazard/risk. In that case, the preliminary Q<sub>1</sub><sup>\*</sup> used in this current risk assessment could change in either direction depending upon the dose rate to the fetus determined during the *in utero* phase of the animal's lifetime exposure.

b. *Developmental effects.* The no-observable-adverse-effect level (NOAEL) for developmental toxicity resulting from exposure to ETU may be 5.0 mg/kg based on a rat study. ETU was shown to be developmentally toxic at dose levels lower than those that produced no apparent maternal toxicity or fetal lethality. At 5.0 mg/kg/day, which was the lowest dose tested, developmental toxicity was observed in the form of delayed ossification of the parietal bone (in the skull). Although the author indicated that this observation was limited to a few large-sized litters and involved small areas, the effect was observed in offspring of dams treated prior to pregnancy through day 15 of gestation as well as in dams treated only during days 8-15 of gestation in a separate experiment. In both experiments, delayed ossification was

clearly dose-related and at higher rates than in controls and appears to be a sensitive indicator of exposure to ETU. It would therefore appear that there is no no-observable effect-level in this study. It was also stated in the publication that the ETU was detected in term fetuses at concentrations comparable to those found in maternal tissues following oral treatment with 20 or 40 mg/kg of ETU from days 7 to 20 of pregnancy and it could therefore not be determined whether or not the malformations arose as a result of direct action on the fetus or indirectly by altering maternal thyroid or other functions. In the previously mentioned new NTP study conducted on rats and mice, results indicated that ETU affected thyroid function as manifested by thyroid hyperplasia in both species. However, a mouse study showed no developmental toxicity at doses as high as 800 mg/kg/day by gavage (0, 200, 400, 800 ppm). It would appear that simple inhibition of the thyroid gland may not necessarily be the mechanism by which developmental effects are manifested in rats. Although a no-observable-effect level (NOEL) was not established in the rat study, the Agency believes the NOAEL is close to the NOEL and could be used for the purpose of calculating Margins-of-Safety/Margins-of-Exposure.

A rabbit study conducted with nabam has recently been submitted to the Agency. The available data show nabam to be a developmental toxicant eliciting major malformations and other manifestations of developmental toxicity in a dose-related manner and at all tested dose levels. The findings include hydrocephaly (confirmed after visceral examination with soft spot and/or domed cranium observed externally), frontals and parietals incompletely ossified, increased incidence of resorptions and an overall increased incidence of malformed fetuses per litter. In addition, the data did not uncover any apparent maternal toxicity at the lowest dose, 3 mg/kg/day nabam. An increased incidence of abortions and other effects were apparent at the high dose level, 60 mg/kg/day nabam. It was the opinion of the reviewer that, even though the study did contain some deficiencies, the rabbit study is a valid study and the results support the conclusion that nabam is a developmental toxicant in the rabbit.

c. *Thyroid effects.* Two subchronic ETU toxicity studies can be found in the open literature. The purpose of both studies was to examine in some detail the subchronic effects of ETU on the thyroid. In the first study, levels of 50, 100, 500 or 750 ppm were fed in the diets



to male Osborne-Mendel rats for 30, 60, 90 and 120 days. A NOEL was not determined in this study due to significant effects of ETU seen on thyroid weights at all dosage levels at 120 days. In the second rat study, a NOEL of 5 ppm was determined for the effects of ETU on the thyroid of Charles River Sprague-Dawley rats. Thyroid toxicity seen at levels above 5 ppm consisted of thyroid hyperplasia, decreased uptake of 125 I (radioactive iodine) by the thyroid and decreased serum levels of T3 and T4. The LEL (lowest effect level) was 25 ppm or 0.25 mg/kg/day. Similar effects were observed in the mouse and rat subchronic studies done prior to the new NTP bioassays in those species.

d. *Other Effects.* Although not a subject of this Special Review, the Agency is concerned about aquatic organisms and avian toxicity as well as the potential for the EBDCs to contaminate ground water. Additional data have been required to more fully assess the potential of the EBDCs to cause reproductive effects in birds and chronic and acute toxicity effects in aquatic organisms. Additionally, a small scale retrospective study for each of the EBDC parent compounds has been required to assess the potential for ground water contamination.

3. *Exposure analysis.* Because of the EBDCs' broad spectrum of use on food crops, the entire U.S. population may be exposed to EBDC and ETU residues through the diet. Also, mixer/loader/applicators may be exposed to the EBDCs and ETU primarily from dermal contact and, to a lesser degree, from inhalation of the substance when applied to crop and non-crop sites, including nabam's use in cooling towers, oil rigs, and sugar and pulp and paper mills.

a. *Dietary exposure.* Dietary exposure is both chronic and acute. When EBDC fungicides are used on food crops, the Agency is concerned about chronic exposure to ETU due to the carcinogenic and thyroid effects of ETU, and acute exposure to ETU due to the developmental toxicity of ETU. Both chronic and acute exposure to ETU may occur through direct exposure by eating EBDC treated food with ETU residues and by *in vivo* conversion of EBDC residues to ETU residues.

i. *Background.* When the Special Review was initiated in 1987, the Agency estimated dietary exposure only to mancozeb and ETU from commodities treated with mancozeb, as it only had acceptable residue data on this EBDC fungicide. The exposure estimates were based on average residues of mancozeb and ETU from residue data on crops

treated with mancozeb. The average residues of mancozeb and ETU were adjusted to take into account percent of crop treated. At that time, percent of crop treated data were available for EBDCs as a group, but not for each individual EBDC fungicide.

Since this time, the Agency has received additional data for mancozeb as well as data for maneb and metiram (and ETU derived from maneb and metiram). The Agency has also obtained updated percent of crop treated information, listed by individual EBDC chemical. Some data were also available for effects of washing, cooking, and other processing (e.g. peeling and trimming). In addition, cooking and processing studies on leafy greens were received from the National Food Processors Association (NFPA) and other interested groups. These data and information have been incorporated into the Agency's current Dietary Exposure Assessment.

One registrant submitted market basket type monitoring data for EBDCs and ETU conducted in the late 1970's. Monitoring data were also obtained from FDA and the States. These data suggest that residues of EBDCs and ETU may substantially degrade between harvest and consumption. Due to the limited number of samples tested, these data were considered too limited to use for a quantitative dietary exposure estimate in this document. Therefore, for use in further refining dietary exposure estimates, EPA has required EBDC registrants to conduct and submit a residue monitoring study (Market Basket Study). Data have been required for one major crop in each crop group for which EBDCs are registered, for major processed commodities, and for meat and milk. Extrapolations will be made within crop groupings to other commodities. All data are due to be received in September 1990. If the market basket survey is not received or produces invalid results, the Agency will make its final determination of dietary risk using the best available data it has at that time.

ii. *Carcinogenicity and thyroid effects.* For chronic exposure, the Agency attempts to estimate the average residue in food at the time of consumption (Anticipated Residue). The anticipated residue is then multiplied by an average lifetime food consumption estimate (based on average consumption estimates derived from the 1977-1978 USDA Nationwide Food Consumption Survey for the U. S. population) and the percent of crop treated to yield the Anticipated Residue Contribution (ARC). The ARC is then multiplied by the carcinogen potency factor ( $Q_1^*$ ) for

ETU to estimate the potential carcinogenic effect, and compared to the ETU Reference Dose (RfD) to estimate potential for non-carcinogenic thyroid effects.

Carcinogenic risk was estimated as a combination of several factors: (1) ETU exposure both from direct exposure (in or on EBDC-treated food commodities) and from indirect exposure (resulting from metabolic conversion of EBDC residues to ETU in the body after consumption of EBDC-treated food commodities), (2) a time factor, and (3) a body surface correction factor. Assessing carcinogenic risk in this manner provides an upper-bound estimate of average individual lifetime risk which applies to 240 million people.

Since food commodities treated with EBDC pesticides contain both EBDC residues and ETU residues, two exposure estimates are necessary to calculate total ETU dietary exposure. A direct ETU exposure estimate is calculated from ETU residues found in or on food commodities. An indirect ETU exposure estimate is calculated from EBDC residues on food commodities that metabolically convert to ETU in the body (also referred to as *in vivo* conversion). To calculate indirect ETU exposure, EBDC exposure is multiplied by a metabolic conversion factor. Total estimated ETU exposure is the sum of estimated exposure from these two sources.

Time is another factor to be considered when estimating carcinogenic risk. Estimates of upper-bound lifetime carcinogenic risks for adults are based on assumed exposure over a 70-year lifespan. For the overall U.S. population, exposure is assumed to continue over an entire lifetime. When estimating carcinogenic risks for children and infants, adjustments are made to estimate exposure for the time period they remain in a specific age subgroup (e.g., infants who are 0 to 1 year olds and younger children who are 1 to 6 year olds). Consideration is also taken into account for the specific types of foods typically consumed by each age subgroup.

Currently, the Agency also incorporates body surface correction factors when calculating carcinogenic risks. The carcinogen potency factor ( $Q_1^*$ ) for ETU is based upon studies in which animals are dosed over virtually their entire lives. Usually, EPA makes a correction of the dose comparing the ratio of body weight to surface area of the adult animal tested versus the ratio of body weight to surface area of adult humans. However, the ratios of body surface areas to body weight for



children and infants are not the same as is this ratio for adults, and thus an additional correction factor is included to more accurately estimate the risk to these two subgroups. The preliminary  $Q_1^*$  of 0.6 (mg/kg/day)<sup>-1</sup> used to estimate dietary risk for the overall population was further adjusted to account for infants by a factor of 0.51 and for children aged 1 to 6 by a factor of 0.64. This additional body weight to surface area adjustment to the "adult"  $Q_1^*$  to estimate carcinogenic risk to children and infants has not been done previously by the Agency for other pesticides. The Agency invites comment on this approach.

There are two basic approaches to estimating anticipated residues. The first uses field or "farm gate" data provided to the Agency as a requirement in the tolerance setting process. For chronic exposure, the average residue from field trial data may be multiplied by processing and degradation factors to yield the anticipated residue estimate. Processing factors may include factors to account for commercial processing, washing, cooking or other food preparation methods. The second approach bases the estimate on monitoring data for raw and processed commodities. Monitoring data potentially reflect the effect of different application rates and frequencies, preharvest intervals (PHIs), storage times and conditions, and percent of crop treated. The estimate from monitoring data could be adjusted for the effects of washing, cooking and other food preparation methods. Commercial processing may increase or decrease residue levels. For the EBDCs, cooking and/or processing may convert parent EBDC residues to ETU.

Finally, whichever process for estimating residues is used, *in vivo* conversion of EBDCs to ETU must be taken into account. Since final carcinogenicity studies for the EBDCs are unavailable, the Agency's exposure and risk assessment for each EBDC chemical includes the ability of the EBDC chemicals to be converted metabolically to ETU. EBDC data available to the Agency indicate that the ETU metabolic conversion rate for all parent EBDC compounds is approximately 7.5 percent of the amount of EBDC consumed. The Agency has multiplied the exposure estimates for each EBDC parent compound by 7.5 percent to account for the ability of EBDCs to metabolically convert to ETU *in vivo* on a weight-to-weight basis.

To estimate "farm gate" residues for maneb, metiram and mancozeb, the Agency used the average EBDC residues

from residue field trial data from studies conducted close to the maximum rate, minimum PHIs, and at least the number of applications that are typically applied as long as they are within the number of applications allowed on the label. If residues from a lower application rate than the maximum application rate were used, then the residue estimate was increased proportionally to determine the maximum residue which might occur. For ETU residue estimates, the Agency used the average ETU residue from field trial data, corrected for the degradation of ETU in frozen sample storage when that degradation in storage in that commodity or a similar commodity exceeded 20 percent. To correct for degradation in frozen storage, the Agency divided the ETU level as determined in field studies by the fraction of ETU remaining as determined in controlled frozen storage stability studies.

Farm gate residue estimates were further refined to take into account some of the effects of treatment of the commodity after harvest, such as commercial processing, washing, peeling, trimming and cooking. Processing factors were determined for each of these effects. Rohm and Haas submitted a study which indicated that an estimated 99 percent of restaurants, households and food processors use some type of preparation procedure (e.g., washing, soaking, rinsing, peeling, trimming) for foods. The study indicated one exception in that an estimated 93 percent of restaurants use a processing procedure on apples. EBDC residue estimates were reduced by up to 93 percent when the effects of washing were taken into account. ETU residue estimates were increased by up to 12.5 percent of the EBDC residue estimate to account for the effects of cooking. Peeling and trimming factors were determined for a few commodities. The effects of cold or ambient storage used in normal channels of trade could not be quantitatively factored into the analysis since no data were available for these effects. However, based on available data on freezing EBDC-treated crops immediately after harvest, it is known that residues of EBDCs and ETU decline during frozen storage and, therefore, would also be expected to decline in ambient and/or cold storage.

For EBDC anticipated residue estimates in commercial processed commodities of apples, sugar beets, tomatoes, snap beans, grapes, corn, peanuts, barley and wheat, the Agency multiplied the anticipated residue estimate for the raw agricultural commodity by a concentration/

reduction factor determined in processing studies required to support tolerances. For potatoes, no concentration of mancozeb or metiram was observed and no conversion of EBDC to ETU was observed, since all samples had non-detectable residue levels. Residue estimates for potatoes and potato products were made based on limits of detection.

For ETU anticipated residue estimates in processed commodities of apples, sugar beet processors use some type of preparation procedure (e.g., washing, soaking, rinsing, peeling, trimming) for foods. The study indicated one exception in that an estimated 93 percent of restaurants use a processing procedure on apples. EBDC residue estimates were reduced by up to 93 percent when the effects of washing were taken into account. ETU residue estimates were increased by up to 12.5 percent of the EBDC residue estimate to account for the effects of cooking. Peeling and trimming factors were determined for a few commodities. The effects of cold or ambient storage used in normal channels of trade could not be quantitatively factored into the analysis since no data were available for these effects. However, based on available data on freezing EBDC-treated crops immediately after harvest, it is known that residues of EBDCs and ETU decline during frozen storage and, therefore, would also be expected to decline in ambient and/or cold storage.

For EBDC anticipated residue estimates in commercial processed commodities of apples, sugar beets, tomatoes, snap beans, grapes, corn, peanuts, barley and wheat, the Agency multiplied the anticipated residue estimate for the raw agricultural commodity by a concentration/reduction factor determined in processing studies required to support tolerances. For potatoes, no concentration of mancozeb or metiram was observed and no conversion of EBDC to ETU was observed, since all samples had non-detectable residue levels. Residue estimates for potatoes and potato products were made based on limits of detection.

For ETU anticipated residue estimates in processed commodities of apples, sugar beets, tomatoes, snap beans, and grapes, barley and wheat, the Agency multiplied the EBDC anticipated residue estimate for the raw agricultural commodity by the percent conversion (parent EBDC to ETU) determined in processing studies, and added the ETU residue estimate from the raw agricultural commodity.



For EBDCs, washing and cooking factors were applied where available. FDA and State monitoring data (1985-1989) were not used because of the insufficient number of samples that were collected and analyzed for EBDCs and/or ETU; thus, the representativeness of the samples of the distribution of ETU in the food supply is unknown. EBDCs and ETU are not detected by FDA's PAM I multiresidue analytical methodology. Far fewer samples were analyzed by FDA and the States for EBDCs and/or ETU than for other pesticide chemicals (such as captan) which are detected by FDA's PAM I multiresidue methodology. In those studies, no more than 15 samples per commodity were analyzed for EBDC parent compounds and ETU derived from these compounds. The available monitoring data were too limited and were not used for the dietary exposure assessment. The registrant's monitoring data were not used because those data were determined to be invalid for several reasons such as the limited number of samples tested and the lack of valid storage stability studies. However, the average ETU residues found in the FDA and State monitoring studies and the registrant's studies are generally 1 to 2 orders of magnitude lower than the Agency's current exposure estimates. For these reasons, the Agency believes that current residue estimates are likely to overestimate cumulative dietary risk and individual risk on many crops. Market Basket survey data have been required under the authority of FIFRA section 3(c)(2)(B).

iii. *Developmental Effects.* For acute exposure, the Agency attempts to estimate the maximum likely residue distribution of single day exposures for certain population subgroups. Anticipated residues for acute exposure were based on the maximum residues or 95th percentile residues from residue field trials, along with processing factors for washing, cooking and commercial processing, as described above for chronic exposure analysis. Adjustment for percent of crop treated is not appropriate for an acute analysis and is not done, because an acute effect may result from a residue in a single serving. Acute analyses were performed for developmental effects of ETU from the use of each parent EBDC compound.

b. *Worker Exposure—i. Methodology.* Agricultural workers, commercial applicators and homeowners are potentially exposed to ETU through mixing, loading and applying EBDC pesticide products to food and non-food crops and conducting field labor in treated areas. Based on available data,

it appears that exposure results primarily from dermal contact. Respiratory exposure is 1 to 2 percent of the total exposure for non-dust formulations which is considered negligible.

The Agency estimated exposure based on surrogate data bases for other pesticides with similar application methods and published literature for dermal and respiratory exposure. For estimating total daily exposure to ETU, respiratory exposure is added to dermal exposure after each has been corrected by individual EBDC absorption factors. Dermal absorption factors of 9 percent for nabam and 6 percent for netiram were used based on actual measurements in studies on those chemicals. The dermal absorption factor for mancozeb was changed from 1 percent (used in the PD 1) to an upper-bound of 10 percent because of limitations in dosages in the currently available study. For maneb, and upper-bound dermal absorption factor of 30 percent (based on an ETU dermal absorption study) was used in the absence of adequate data. Based on limited data, the Agency assumes that mixer/loader/applicator exposure to ETU is dependent on the percent of ETU present which has been expressed as a percentage of the parent EBDC. In order to more accurately predict mixer/loader/applicator exposure for the ETU breakdown product for each EBDC and respective formulation type, the Agency has required EBDC registrants to submit tank mix stability data for representative end-use products of all formulation types through FIFRA section 3(c)(2)(B). These data are due to EPA in December, 1989.

ii. *Agricultural uses.* The EBDCs are applied to fruit and vegetable crops to prevent damage by fungi and to protect harvested crops from deterioration. The majority of these uses are pre-harvest. The EBDCs are also used as a seed piece (chunk of potato used for propagation) treatment for potatoes. Application methods include ground boom, airblast and pressure sprayers.

In the PD 1, the Agency evaluated non-dietary exposure to applicators of mancozeb to apples, onions, potatoes and tomatoes by a variety of application methods. The exposure to mixer/loaders wearing long-sleeved shirts, long pants and chemical-resistant gloves was estimated to be 0.28 mg/lb. a.i. by the dermal route and 4.3 ug/lb. a.i. by the inhalation route of exposure when handling wettable powders.

Since the PD 1 was issued, the Agency has received additional information regarding the percent of ETU in relation

to the parent compound for mancozeb and maneb and has re-estimated exposure for workers who apply these EBDC products. Based on this information, the assumptions previously used by the Agency that ETU exposure to the mixer/loader is 0.5 percent of exposure to the parent compound and for the applicator is 0.6 percent has been changed to reflect this new data for maneb and mancozeb. Because of the many different crops for which EBDC products can be applied, and certain similarities among them, the Agency selected four crops which it believes represent exposures associated with all other crops and types of application. They are sweet corn, grapes, apples and potato seed pieces. Sweet corn represents row crops and ground boom application, grapes represent airblast application to trellised crops, apples represents orchard crops and airblast application, and potato seed pieces represents preplant treatment of seed pieces. Exposure estimates assume the use of long-sleeved shirts and long pants during mixing/loading and application, and the use of chemical-resistant gloves during mixing and loading. The exposure estimates were based on surrogate data bases and published literature and adjusted for dermal absorption when estimating risks.

*Commercial ornamentals.* Mancozeb and maneb are applied to commercial ornamental trees, plants and shrubs by tractor-mounted power handheld spray guns. The Agency estimates that these pesticides are applied 10 times a year to approximately 6 acres of nursery stock in those nurseries that apply EBDC pesticide products. Two acres are sprayed daily requiring 3 days to treat the nursery once and 30 days to treat it 10 times.

The applicator exposure was estimated to be 43 mg/lb. a.i. by the dermal route and 33 ug/lb. a.i. by the inhalation route. The mixing/loading exposure during commercial ornamental spray operations is expected to be similar to mixer/loader exposure during agricultural uses in that the EBDCs are being added to spray tanks.

iv. *Homeowner lawns and gardens.* Exposure estimates were developed for homeowners applying maneb, mancozeb and metiram to vegetables, strawberries, ornamentals, fruit trees and turf by either a compressed air hand-held sprayer or a hose-end sprayer.

v. *Industrial.* The Agency has limited use information on nabam's industrial uses. Two types of loading systems are used: open pour-loading and closed-loading. Of the industrial uses of nabam,



only the water cooling systems (tower) and oil well drilling fluids use an open pour-loading system in addition to closed loading systems. All other industrial uses of nabam including use in paper mills, sugar mills and in metal working coolants employ closed loading systems. Although the Agency has no exposure data on nabam used in industrial settings, information received from two registrants was used in estimating exposure. To estimate worker exposure to nabam, the Agency used its surrogate data base for mixers/loaders using open-pour liquid formulation agricultural pesticides and using closed loading systems. Product labels state operators must wear long pants, long-sleeved shirts, boots, a face shield and rubber gloves when handling the product. Exposure is considered minimal when closed loading systems are used.

According to experts in industrial biocides contacted by the Agency, nabam is not used as an additive for metal working coolants. An alternative chemical, methylene bithiocyanate, is being used.

4. *Risk estimation—Dietary.* To estimate dietary exposure and then compare that estimate to a previously determined Reference Dose (RfD) or to estimate potential carcinogenic effects by multiplying exposure times the carcinogen potency factor ( $Q_1^*$ ) to estimate risk, the Agency has developed the Dietary Risk Evaluation System, DRES, formerly known as the Tolerance Assessment System (TAS). This computer-based tool uses estimates derived from a survey conducted by the U.S. Department of Agriculture (1977-78) which involved 3-day dietary records for 30,770 individuals and 3734 food items.

The DRES can estimate dietary exposure and risk for the U.S. population and 22 subgroups of the U.S. population. DRES is capable of using "anticipated residues" combined with consumption data as a means of generating a realistic risk assessment. Anticipated residues and percent of crop treated estimates were used in the DRES to estimate dietary risks from residues of EBDCs and ETU in foods.

i. *Carcinogenic risk.* Carcinogenic risk due to ETU from dietary exposure is the combination of risk from direct ETU residues plus the risk from ETU formed by *in vivo* metabolic conversion of the parent EBDC residue. Risks from each of these exposures were estimated for ETU derived from each EBDC parent compound.

In the PD 1, the dietary risk from ETU derived from mancozeb only was estimated because no adequate data were available for other EBDCs. The potential direct dietary risk (not including effects of *in vivo* conversion) from exposure to ETU based on mancozeb field residue data was estimated to be  $5 \times 10^{-6}$ . This was obtained by multiplying the daily estimated exposure to ETU [ $3.6 \times 10^{-5}$  mg/kg/day] by the cancer potency factor for ETU designated as the  $Q_1^*$  [ $0.14$  (mg/kg/day) $^{-1}$ ]. In addition, the Agency also estimated dietary risk of  $1.7 \times 10^{-6}$  from exposure to ETU from conversion of mancozeb, *in vivo*, after eating food containing mancozeb residues. The total potential dietary risk from exposure to ETU from the use of mancozeb on food crops was estimated in the PD 1 to be  $2.2 \times 10^{-6}$ , which was obtained by adding  $5 \times 10^{-6}$  and  $1.7 \times 10^{-6}$ .

Based on the exposure assumptions described in Unit II.B of the Technical Support Document, EPA has estimated dietary risks for ETU exposure from maneb and metiram in this PD 2/3 and reestimated dietary risk to ETU from the use of mancozeb. These risk estimates differ from those presented in the PD 1 in that: (1) They are based on crop residue data from maneb and metiram also and additional crop residue data for mancozeb, (2) the *in vivo* conversion rate used is 7.5 percent calculated on a weight-to-weight basis, (as compared to 12 percent calculated on a mole basis used in the PD 1) based on a recently submitted rat metabolism study and using a molecular weight conversion factor, (3) adjustments were made for commercial processing, washing, trimming and cooking, (4) the new preliminary  $Q_1^*$  of  $0.6$  (mg/kg/day) $^{-1}$  was employed and (5) zineb risk estimates are not included. The combined ETU dietary risk based on direct exposure to ETU residues (not including *in vivo* conversion) in foods from maneb, mancozeb and metiram fungicides with registered food uses is now estimated to be  $1 \times 10^{-4}$  to the general population. To better approximate actual ETU dietary risk from consumption of foods treated with the EBDCs, the dietary risk estimates from *in vivo* conversion of EBDCs to ETU were added to the dietary risk estimates for direct dietary exposures to ETU, which results in a combined total risk of  $4 \times 10^{-4}$  to the general population. The following table (Table 1) presents ETU risk estimates from direct exposure, *in vivo* conversion and total estimated risks (direct exposure plus *in vivo* conversion) from the use of EBDCs:

TABLE 1.—ETU DIETARY CARCINOGENIC RISK ESTIMATES FROM THE USE OF EBDC PESTICIDES

Chemical	Parent exp.	<i>In vivo</i> ETU exp.	<i>In vivo</i> risk	Direct ETU exp.	Direct risk	Total risk
Mancozeb.....	.00165.....	.00091.....	5.9E-05.....	.00089.....	4.0E-05.....	9.9E-05
Maneb.....	.00365.....	.00034.....	2.0E-04.....	.00132.....	6.0E-05.....	2.6E-04
Metiram.....	.00038.....	.00044.....	2.7E-05.....	.00017.....	7.7E-06.....	3.5E-05
Totals.....			2.9E-04.....		1.1E-04.....	4.0E-04

Exp=exposure estimates in mg/kg body weight/day.

Although there are currently no food tolerances established for nabam under 40 CFR part 180, FDA established a secondary direct food additive regulation (21 CFR 173.320), which permits nabam residues of 3 ppm on raw sugar beets or sugarcane from the use of nabam in sugar mill grinding, crusher or diffuser systems. The registrants of nabam have requested voluntary cancellation of all agricultural food and

feed uses and sugar beet and sugarcane transport and flume water use.

Because the source of the ETU contribution from individual EBDC chemicals cannot be determined unless the EBDC pesticide used is known, and currently available analytical methods cannot distinguish among the various EBDC fungicides and the EBDC fungicides are often substitutes for one another, dietary risk is considered by the Agency in this risk assessment to be

the total estimated risk from ETU (from direct exposure and *in vivo* conversion) from the use of all EBDCs on the individual crops. See the Technical Support Document, Table II-17, for a listing of ETU dietary carcinogenic risk estimates by individual crop from direct exposure to ETU and *in vivo* conversion.

ii. *Developmental toxicity.* In the PD 1, developmental toxicity risk from dietary exposure was not discussed. However, a developmental toxicity risk assessment



for this effect was conducted for the Mancozeb Registration Standard. Both direct exposure to ETU residues on the crops and *in vivo* conversion of mancozeb to ETU were considered. To estimate maximum exposure on a given day, maximum residues of mancozeb and ETU were estimated. It was assumed that 100 percent of the crop was treated using all available residue data (not necessarily at the maximum rate). Label PHIs were factored into the analysis. All dietary margins of exposure were found to be above 100 (based on a NOAEL for ETU of 5 mg/kg for developmental effects) for the U.S. population of pregnant women from exposure to ETU from the use of mancozeb on crops.

In this PD 2/3, developmental risk from dietary exposure to ETU from consumption of food treated with EBDC pesticides is estimated by comparing the maximum exposure estimates of each EBDC chemical (mg/kg body wt./day) to the NOAEL for ETU (5 mg/kg/day) from a rat teratology study. A maximum exposure estimate represents the maximum amount of ETU ingested by a consumer on any given day. The comparison between exposure and the NOAEL is expressed as a Margin-of-Safety (MOS) or Margin-of-Exposure (MOE). An acute dietary exposure analysis using anticipated ETU residues from each EBDC chemical was used to estimate the distribution of single-day exposure for certain population subgroups, which in this case are females of child-bearing age. The analysis assumes that ETU levels occur uniformly within each food commodity at the anticipated residue levels. The estimated average MOSs/MOEs ranged from 770 for maneb to 4985 for mancozeb. For more information see the Technical Support Document.

iii. *Thyroid effects.* In this PD 2/3, the toxicology endpoint used in calculating the oral (dietary) Reference Dose (RfD) for ETU derived from the parent EBDCs was based on thyroid effects at a Lowest Effect Level (LEL) of 0.25 mg/kg of body weight/day from a 2-year rat feeding study. Exposure estimates from direct ETU exposure and conversion of EBDC to ETU were calculated from the anticipated residue estimates and corrected for percent of crop treated. Total estimated ETU exposure from each EBDC parent was compared to the RfD for thyroid hyperplasia. The estimate of total ETU exposure for all 55 mancozeb, maneb and metiram food crops was equivalent to 825 percent of the RfD for the general U.S. population, 3313 percent for infants and 1837 percent for young children (1 to 6 years

old). The estimate of the total ETU exposure for the 13 registrant-retained crops was equivalent to 35 percent for the general population, 40 percent for infants and 71 percent for young children.

iv. *Conclusions.* Although the current estimates of dietary risk are based on the best available data, the Agency believes that the currently available residue data base may overestimate dietary exposure and risk for two possible reasons: (1) The residue estimates for some crops are likely to be higher than those on the dinner plate, and (2) the percent of crop treated is not accurately known for certain sites with low usage. The exposure estimates are based on residue data submitted to support tolerances with some corrections for the effects of commercial processing, washing and cooking.

Field trial data at the maximum registered rate and the minimum PHI required to support tolerances represent "farm gate" exposure. However, foods are not always treated at the maximum rate (especially in the early part of the season) nor are they always harvested at the specified PHI; in many cases, crops are treated at less than the specified rate, or are harvested several days after the minimum PHI. Additionally, the limited amount of FDA and State monitoring data available to the Agency suggest the possibility of lower levels of residues than those found in field studies even after taking into consideration expected reductions due to commercial processing, washing, cooking and percent of crop treated. The Agency expects that a well-designed and well conducted residue monitoring study could in some cases more accurately estimate ETU residues "at the dinner plate" and could conceivably support different risk estimates which may be as much as one to two orders of magnitude lower than current risk estimates. These data were required in a March 31, 1989 Data Call-In Notice and are due to be submitted to the Agency in September, 1990.

EBDC and ETU residues have both been shown to degrade in frozen storage. Frozen storage stability data and limited data on commodities harvested at different PHIs show a decline in EBDC and ETU residues with time in frozen storage and in the field. Ambient and cold storage degradation data for EBDCs and ETU in normal channels of trade could enable the Agency to model degradation rates.

In cases where percent of crop treated was believed to be less than 10 percent, the Agency used a constant percent of crop treated estimate of 10 percent

because of the lack of refined use data (except in the case of wheat where the Agency has data showing one percent of the crop is treated). Where the actual percent of crop treated may be less than 1 percent, the estimated risk for that commodity could be possibly inflated by as much as one order of magnitude. The residue monitoring study could more closely reflect actual usage patterns and may help to further define percent of crop treated in some cases. To the extent that these data are available, they will be considered in the Agency's Final Determination along with any other residue data which the Agency currently has or obtains in response to this or other documents.

b. *Mixer/loader/applier risks—i. Carcinogenic risks.* ETU carcinogenic risk estimates for persons mixing, loading and applying EBDC pesticides range from  $10^{-3}$  to  $10^{-7}$ . These risk estimates are based on current specified label requirements for mixer/loaders (long pants, long-sleeve shirts, gloves, hats and boots). The addition of protective clothing (coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, shoes, socks and goggles or a face shield and a chemical-resistant apron) may reduce risks to mixers/loaders in excess of 40 percent and applicators in excess of 65 percent. When such protective clothing requirements as specified in the mancozeb, maneb, metiram and nabam Registration Standards and as proposed in this document for maneb, mancozeb, metiram and nabam are factored into these risk estimates, one carcinogenic risk estimate remains above  $10^{-4}$  (maneb on commercial ornamentals). In addition, all homeowner uses for maneb and homeowner use of mancozeb on fruit trees and turf have estimated risks which exceed  $10^{-4}$ .

ii. *Developmental and thyroid effects.* Margins-of-safety/exposure (MOSs/MOEs) were calculated for agricultural workers, commercial applicators, industrial workers and homeowners who may be exposed to EBDC pesticide products. Developmental and thyroid MOSs/MOEs were calculated using daily exposure estimates. For mancozeb and metiram where information was available on the parent compound, the developmental NOEL for the parent and the NOEL for ETU were used to calculate the MOS/MOE resulting from exposure to either mancozeb or metiram and to the ETU derived from those parent compounds. For maneb and nabam, the Agency used the developmental study NOEL for ETU (5 mg/kg/day) and used *in vivo* conversion of the parent to ETU plus direct ETU



exposure to calculate the MOSs/MOE. Thyroid MOSs/MOE also were calculated using seasonal exposure estimates for those sites which the Agency considers as having high consecutive exposure scenarios (i.e., grapes, apples and commercial ornamentals). For mancozeb, maneb and metiram, information was available on the parent compound and, therefore MOSs/MOE were calculated based on exposure to the parent plus direct exposure to ETU (0.25 mg/kg/day). For nabam where there was no information available on the parent, MOSs/MOE were calculated based on direct exposure to ETU and an *in vivo* conversion. The Agency believes that although thyroid MOSs/MOE based on repeated daily exposures represent "worst case", it is prudent to calculate them in this manner due to the fact that these workers may not have time to recover from thyroid effects before their next exposure. The Agency's current data base does not provide a definitive basis for determining a likely recovery period for thyroid effects.

Several MOSs/MOE were below 100. With incorporation of additional protective clothing requirements as specified in the mancozeb, maneb, metiram and nabam Registration Standards and as proposed as requirements in this document for mancozeb, maneb, metiram and nabam (coveralls over long-sleeved shirts and long pants, chemical-resistant gloves, shoes, socks and goggles or a face shield and a chemical-resistant apron), most MOSs/MOE increased to 100 or higher.

iii. *Conclusions.* Assumptions surrounding mixer/loader/applicator developmental and thyroid risks are:

(a) Due to the lack of dermal absorption data on the parent compound, an upper-bound estimate of 30 percent absorption factor was used for maneb based on an ETU dermal absorption study. This may possibly overestimate exposure by 3-fold because dermal absorption for maneb is expected to be closer to mancozeb and metiram (between 6 to 10 percent) as they are structurally similar chemicals. This would increase most MOSs/MOE (with additional protective clothing) to over 100. See Tables II-20 in the Technical Support Document. Dermal absorption data have been required for maneb and its ETU degradate under the authority of FIFRA section 3(c)(2)(B). These data are required to the Agency in May, 1990, and will be used to further refine mixer/loader/applicator carcinogenic, developmental and thyroid risk estimates.

(b) Daily exposure estimates used to calculate thyroid MOSs/MOE may

present "worst case" risks because they assume a high level of exposure over a short period of time. This is compared to seasonal MOSs/MOE which assume a lower level of exposure over a longer period of time.

(c) Exposure to ETU was assumed to be linearly proportional to that of the parent EBDC. Based on limited data, the amount of ETU, expressed as a percent of the parent EBDC after 4 hours in a tank mix, varied from 0.1 percent to 0.2 percent for mancozeb to 6 percent for maneb wettable powder formulations. Given the similar pattern of use for the various EBDCs on a given commodity, the difference could, in some cases, result in a difference of up to 60-fold in mixer/loader/applicator exposure and risk, depending on which EBDC product was used for a particular use. Tank mix stability data required by the Agency's March 1989 Data Call-In will be helpful to refine estimates of the ETU breakdown in EBDC products and more accurately define risk estimates. These data are due to EPA in December 1989.

(d) Due to the lack of nabam exposure data on industrial uses, exposure estimates for nabam's industrial uses were based on agricultural closed and open-pour systems. The open pour method of transferring agricultural pesticides into spray tanks produces significant dermal exposure even with the use of protective clothing. The less sophisticated and more variable equipment used in agricultural settings makes its applicability for estimating exposure to these sites limited. The use of antimicrobials with closed, metered loading in industrial settings (pulp and paper mill systems, cooling water systems and metalworking fluids) suggest that worker exposure is minimal. The Agency believes that risk estimates based on agricultural exposure data may possibly overestimate exposure for nabam's industrial uses. The March 1989 Data Call-In has required dermal exposure data on oil well drilling (open-pour systems) and sugar/paper mills (closed systems). These data are due to EPA in March 1990. The Agency will refine worker exposure nabam risk estimates upon evaluation of the required exposure studies.

iv. *Rebuttal analysis.* The Agency received comments relating to risks in response to the PD 1. Rebuttal comments are on file in the EBDC Public Docket and a full discussion of rebuttal comments is given in the Technical Support Document. The following is a summary of the major comments. Some recently submitted comments will be addressed in the PD 4.

a. *Carcinogenicity—Rebuttal comment.* ETU should not be classified as a Group B<sub>2</sub> carcinogen since the effect only occurs above an exposure threshold.

*Agency response.* Since ETU induces an increased incidence of thyroid follicular cell adenomas and adenocarcinomas in rats and hepatomas in mice, it has been placed in Group B<sub>2</sub> (probable human carcinogen) as defined in criterion "a" of the Agency's Cancer Risk Assessment Guidelines. This classification is also supported by positive structure-activity data since several other thyroid inhibitors (i.e. thiouracil and thiourea) have been found to induce hepatomas and/or thyroid tumors in rodents. Scientific evidence does not currently justify a threshold level for both types of tumors. If the Agency develops a policy on the classification of "threshold" carcinogens and if the registrant is able to show that the induction of thyroid and liver tumors is a threshold phenomenon, the Agency would reevaluate the weight-of-evidence and the appropriateness of the currently employed method for quantitative risk assessment.

*Rebuttal comment.* Since mouse data were used for calculating the Q<sub>1</sub><sup>\*</sup>, the conversion rate of mancozeb to ETU in the mouse, not the rat, should be used in determining the risk of exposure by various routes to ETU.

*Agency response.* The Agency used the conversion factor for mancozeb to ETU derived from a rat metabolism study for the purposes of risk assessment. This was the only available metabolism study on mancozeb. For the purposes of risk assessment for humans, the conversion factor that should be used is the one that would best approximate the conversion factor applicable to humans. The Agency believes it is more appropriate to use the available rat metabolism data rather than to estimate the conversion factor for the mouse.

*Rebuttal comment.* A surface area correction should not be done when determining the Q<sub>1</sub><sup>\*</sup> for ETU.

*Agency response.* The Agency's current Cancer Risk Assessment Guidelines support using surface area correction when determining a Q<sub>1</sub><sup>\*</sup> for any substance. The Cancer Risk Assessment Guidelines state "in the absence of comparative toxicological, physiological, metabolic, and pharmacokinetic data for a given suspect carcinogen, the Agency takes the position that the extrapolation on the basis of surface area is considered to be appropriate because certain pharmacological effects commonly scale



according to the surface area." The interspecies extrapolation for carcinogenic effects is accounted for by expressing the dose as mg/squared meter body surface area/day. To modify the rodents' experimental dose to the adult human equivalent dose by surface area assumes that different sized animals are not equally sensitive to equal concentrations. This is based on the observation that smaller animals are more efficient eliminators of the parent compound and/or its metabolites than larger animals. This difference in elimination ability is accounted for by the difference between the species surface area to volume ratio. An additional correction factor is included to more accurately estimate the risk to infants (0 to 1 year olds) and younger children (1 to 6 year olds) because the ratios of body surface areas to body weight for infants and children are not the same as is this ratio for adults. These correction factors were 0.64 for children and 0.51 for infants. This additional body weight to surface area adjustment to the "adult"  $Q_1$  to estimate carcinogenic risk to children and infants has not been done previously by the Agency for other pesticides. The Agency invites comment on this approach.

**b. Mutagenicity—Rebuttal comment.** ETU is not mutagenic. In 1986, a battery of mutagenicity assays on ETU were submitted to the EPA Toxicology Branch Peer Review Committee for consideration. In addition, results of mutagenicity assays with maneb, metiram, mancozeb and nabam were summarized by the Committee to further evaluate the mutagenic risks associated with ETU exposure. The committee determined that results of available mutagenicity data could not be used as supportive information regarding the carcinogenic potential of ETU.

**Agency response.** The Agency has performed a more recent evaluation of available information on ETU for genetic activity. It was concluded that the body of evidence for ETU suggests that ETU is capable of inducing a variety of genotoxic endpoints. These include responses in gene mutation assays (e.g., Salmonella and mouse lymphoma assays), structural chromosomal assays (e.g., aberrations in cultured mammalian cells as well as a dominant lethal assay) and other genotoxic effects (e.g., bacterial rec assay and yeast conversion assay). It must be noted that while ETU does induce a variety of genotoxic endpoints which serve as support for mutagenicity concern, ETU does not appear to be a relatively potent genotoxic agent. For

example, there are instances where positive and negative results in the same type of mutagenicity assay are reported from different investigators; however, these results may be dependent upon the test conditions in each individual laboratory (e.g., problems in protocol, reporting or use of low concentration levels). Overall, it appears that ETU produces a spectrum of genotoxic effects which provide a basis for a mutagenicity concern for ETU. The mutagenicity concern would provide support in the weight-of-evidence determination of ETU's carcinogenic potential. The Agency therefore disagrees with the commenter that ETU is not mutagenic.

**c. Developmental effects—Rebuttal comment.** The differences in developmental toxicity potential of ETU in various species can be explained by different rates or extent of metabolism in these species.

**Agency response.** The Agency agrees that differences in the response of various species to the developmental effects of ETU could be due to different rates or extent of metabolism of ETU in these species. If the mouse metabolizes ETU at a faster rate than the rat, one would expect that ETU would more likely be shown to be developmentally toxic in the rat than in the mouse. The commenter also states that the half-life for elimination of ETU in the cat is 3.5 hours and that the cat possesses a metabolic pathway for ETU not present in the rat. ETU is not developmentally toxic to the cat. The Agency is not certain of the point of the registrant's discussion. If the registrant is suggesting that human metabolism may be more like the cat than the rat, and that differences in metabolism explain the different developmental responses in various species, the Agency does not believe there is sufficient information available to conclude either point. The Agency, as noted, used a metabolic conversion rate which best approximated that factor applicable to humans. As explained earlier, it believes the rat metabolism data to be appropriate in this case.

**d. Thyroid effects—Rebuttal comment.** A threshold exists for the effects of ETU in the thyroid of rats and in the liver of mice.

**Agency response.** The Agency agrees that a threshold may exist for the noncarcinogenic effects of ETU on the thyroid and that a threshold mechanism may exist for the formation of thyroid adenomas and carcinomas in the rat. However, the Agency does not believe that a NOEL for the non-carcinogenic chronic effects of ETU on the thyroid of rats has been demonstrated. Although

the Agency agrees that a NOEL for the non-carcinogenic effects of ETU on mouse liver has been established, it does not agree that a threshold mechanism by which ETU causes liver tumors has been demonstrated. Definitive evidence has not been presented on the mechanism by which ETU causes mouse liver tumors. In the absence of such evidence, the Agency believes it is prudent to assume that mouse liver tumors observed following exposure to ETU lack a threshold for this phenomenon.

**Rebuttal comment.** Rohm and Haas commented that the Agency used the wrong toxicological endpoint for determining the ratio of NOELs for the liver effects of ETU versus mancozeb. "EPA calculated the potential carcinogenic risk for mancozeb based on mouse liver tumor induction by ETU. However, it established metabolic conversion of mancozeb to ETU based on data from another species, the rat."

**Agency response.** The registrant is correct in that the Agency used different endpoints for determining the ratio of NOELs of ETU to mancozeb in the mouse. Nevertheless, the ratio of NOELs for the liver effects of ETU versus mancozeb calculated by the Agency are identical to those reported by Rohm and Haas from the CD-1 mice study. The ratios for thyroid hyperplasia were stated as ETU:mancozeb at 10 ppm:100 ppm and the ratios for increased liver weights as ETU:mancozeb at 100 ppm:1000 ppm.

Using these same NOELs determined for the effects of each of these chemicals on the thyroid, the Agency has estimated the same ratios for thyroid and liver effects of ETU and mancozeb.

**Rebuttal comment.** The Agency is not correct in its determination of a NOEL for the effects of ETU on the thyroid in the subchronic ETU rat study conducted by Freudenthal. The commenter states that the NOEL for thyroid effects due to ETU reported in the Freudenthal subchronic study was 25 ppm.

**Agency response.** The Agency disagrees with the commenter. An Agency review dated March 7, 1986 set the NOEL for thyroid effects at 5 ppm based upon an increase in the incidence of thyroid hyperplasia, scored as moderate, seen at the 25 ppm dose level at 60 days but not at 90 days. The Agency believed that the effect at 25 ppm was treatment related due to the scoring of the lesion as moderate, since the effect was not seen in the control group nor seen in the animals sacrificed at 90 days.

**Rebuttal comment.** ETU does not solicit the same magnitude of an effect



in man on thyroid function that it does in the rat. The maneb registrant states that maneb has a reservoir of  $T_4$  that "is always available to counteract stimulation of the thyroid, while in rodents, inhibition of  $T_4$  synthesis and/or release causes immediate stimulation of the thyroid."

**Agency response.** While the Agency agrees that thyroid function may be controlled somewhat differently in humans and the rat, a United Kingdom factory worker study concluded that  $T_4$  levels in workers were lowered due to ETU exposure. Since the effect of ETU on thyroid function in the human (including its impact on  $T_4$  recovery) is not known definitively, the Agency is relying on the results of rodent studies to extrapolate to the human.

**e. Exposure—Rebuttal comment.** Due to the distinctions among the different EBDCs (chemical structure and use pattern), dietary exposure data regarding one of the EBDCs cannot always be generally extended to the other EBDCs.

**Agency response.** The Agency agrees that there are differences among the different EBDCs both in terms of the chemical structure and, sometimes, the use pattern. As a result of the Storage Stability Data Call-In Notices of March 31, 1987, the Agency now has crop residue data for maneb and metiram and for ETU derived from these two pesticides. These data have been used to assess dietary exposure to these chemicals. Based on the residue data received, some differences in residue levels of EBDC parent and ETU in foods are noted. Maneb and maneb-derived ETU residues were generally significantly higher than mancozeb or metiram ETU residue levels. Metiram and metiram-derived ETU residues were generally higher than mancozeb or mancozeb-derived residue levels. Differences in residue levels were generally within 1 order of magnitude.

There are also similarities among the different EBDCs both in terms of chemical structure and use pattern. The EBDCs all degrade to ETU and can be determined by analytical methods based on carbon disulfide evolution. Additionally, the formula weights for the monomers of all EBDCs are similar.

Although it perhaps would be preferable to base dietary exposure estimates on residue data from each individual EBDC chemical, when residue data were unavailable for one EBDC, data from other EBDCs were used because the differences in residue levels among the various EBDCs were generally less than 1 order of magnitude. In this analysis, this type of

extrapolation was done for metiram and metiram-derived ETU on several crops.

**f. Additional comments—Rebuttal comment.** The Natural Resources Defense Council (NRDC) suggests that if residue chemistry data submitted by EBDC registrants in response to Data Call-Ins are inadequate, the Agency should suspend the use of those registrations.

**Agency response.** It is the Agency's general policy to suspend product registrations for failure to take appropriate steps in response to a Data Call-In Notice, including but not limited to failure to submit adequate data in response to FIFRA section 3 (c)(2)(B) requirements. In examining issues relating to whether a registrant has taken the appropriate steps to meet data requirements or the adequacy of data submissions, EPA considers a number of factors, including but not limited to the nature and origin of the problems with the data, the extent to which studies were conducted according to Agency requirements, and the nature of the registrants' efforts to generate the data, even if the data turn out to be unacceptable for risk assessment purposes. The Agency did not issue Notices of Intent to Suspend to some EBDC registrants for failure to submit data sufficient for risk assessment purposes based upon its assessment of the registrants' efforts to generate the data. However, some Notices of Intent to Suspend were issued in instances where no data at all were submitted or the effort and/or the conduct of the study was deemed not to be adequate.

**Rebuttal comment.** NRDC argued that the Federal Government has not protected consumers from EBDC residues in the diet. The multiresidue methods used by FDA to identify pesticide residues in food cannot detect the EBDCs or ETU, and the methods available for specialized tests are time consuming, of questionable accuracy, and unsuitable for enforcement purposes. In addition, very few samples have been tested for the EBDCs using the specialized methods currently available. GAO indicated that FDA had analyzed only 154 domestic samples for EBDCs between 1978 and 1987. Additionally, the Agency has stated in the mancozeb Registration Standard that the available methods are inadequate for enforcement purposes because none are specific for mancozeb. EPA should not allow the widespread continued use of EBDCs in agriculture when FDA is unable to detect the presence of these residues in food and enforce EPA's tolerances.

**Agency response.** Methodologies for EBDCs and ETU are available in The

Food and Drug Administration's Pesticide Analytical Manual, Volume II (PAM II). The available methodology for EBDCs analyzes them as a group by degradation to carbon disulfide (Keppel method) and thus can be considered a multiresidue method. EPA has received reports of difficulties in using the EBDC and ETU methodology from the State of California Department of Food and Agriculture (CDFA). Although there are some drawbacks to the Keppel method, the Keppel method is the best method known to the Agency for tolerance establishment and enforcement purposes. This method was collaboratively studied and is designated as the official, final action method by AOAC for certain dithiocarbamate formulations. The method is listed as Method III in PAM II and is used by FDA for enforcement purposes. The Agency believes that the Keppel method provides satisfactory results and good reproducible recoveries when used by analysts experienced with the method. For ETU, the Agency recommends the Onley method. The Onley method for ETU has been studied collaboratively, is the official, final action method for potatoes, spinach, applesauce and milk and provides acceptable results when properly validated with recovery and control data.

The Agency agrees that the FDA multiresidue methods available in the Pesticide Analytical Manual Volume I (PAM I) do not detect EBDCs or ETU, and thus FDA and the States analyzed fewer samples for EBDCs than for pesticides which were capable of being detected by the PAM I Multiresidue methods. However, no current policy exists requiring that a pesticide be capable of being analyzed by a multiresidue method. The registrants have been required to test the EBDCs and ETU using the FDA PAM II multiresidue methods. The results of some of those tests are now available. Mancozeb, maneb, metiram and ETU were not detected by the PAM I methods.

Regarding the suitability of analytical methods for enforcement purposes, the Agency has required, from the registrants, methodology which is specific for each EBDC pesticide. These data have been required through the Registration Standards and/or Comprehensive Data Call-In Notices for each of the EBDCs. The registrants have reported difficulties in developing specific analytical methodology. In the absence of such specific methodology, the Agency recommends the use of the Keppel method for enforcement



purposes. Additionally, the Agency is conducting a Special Review of all EBDC pesticides as a group, partially because of the difficulties of distinguishing among the various EBDCs and because ETU is a common metabolite and degradate of all of the EBDCs and is of significant toxicological concern.

Existence of specific enforcement methodology and ease of use of analytical methodology are not the only criteria used by the Agency in determining registration status or initiation of Special Review. If specific analytical methods are developed and replace the Keppel method as the official enforcement method for the EBDCs, then FDA will need to use five different methods instead of the one analytical method currently used.

**Rebuttal comment.** A nabam registrant requested that the Agency terminate the Special Review process for nabam. They contended that nabam is used exclusively as an industrial microbicide and that Margins-of-Safety/Margins-of-Exposure associated with these uses are acceptable. They submitted two reports: "Exposure and Risk Assessment for Applicators of Nabam Containing Microbiocides" and "Benefits of Nabam Containing Microbiocides."

**Agency response:** The Agency disagrees with the registrant's request to terminate a Special Review of nabam. Nabam has registered industrial uses. The Agency has reviewed the registrant's applicator exposure study and noted that a NOEL of 0.25 mg/kg/day was used in their risk assessment for thyroid toxicity. The Agency disagrees with Margins-of-Safety/Margins-of-Exposure calculated using a NOEL of 0.25 mg/kg/day and points out that, in its opinion, a NOEL for the effects of ETU on the thyroid has not been determined. In this study, an LEL (Lowest Effect Level) was established at 5 ppm (0.25 mg/kg/day).

The information submitted on the benefits of nabam were incorporated into the Agency's risk benefit analysis of nabam.

#### **B. Benefits Assessment**

**1. Synopsis of benefits assessment.** If all EBDC registrations on all food crops were cancelled, estimated direct losses to growers (producer impacts) would be approximately \$46 to \$75 million per year and projected loss to society (efficiency impacts), at least in the short term, would range from approximately \$90 to \$305 million per year. Efficiency impacts are concentrated on three crops: lettuce, peppers and celery. Registered alternatives exist for almost all uses of

the EBDCs, but in most cases the alternatives are more expensive. However, for some food crops, projected increased production costs are offset by estimated increases in yields. The estimated impact of cancellation on non-food uses is \$5 to \$15 million of producer/user impacts, chiefly for commercial ornamentals. For certain industrial sites, nabam is more expensive to use than certain alternatives and costs to industrial users could decrease with a shift to alternative biocides.

**2. Method of analysis.** The information used to evaluate the benefits of the EBDCs was derived from several sources. These sources include: public comments in response to the PD 1, the registrants, USDA/State Extension Service and research personnel, published State pest control recommendations, scientific literature including the American Phytopathological Society's Fungicide and Nematicide Test Results for the years 1955 to 1987, National Pesticide Information Retrieval System (NPIRS), the USDA/State/EPA 1978 Assessment of EBDC Fungicide Uses in Agriculture, analyses prepared by the Agency staff, a Cooperative Agreement between the Agency and the University of Georgia, and an Agency contractor.

The general approach of this analysis was to evaluate, on the basis of available information, the possible economic impacts of a range of regulatory options including the cancellation of some or all registered uses for EBDC fungicides or modifications to current methods of use of EBDC fungicides. Cancellation options included an analysis of alternative pest control technologies including non-chemical methods. Chemical alternatives were determined from a listing of registered pesticides. The most probable alternatives to EBDCs were chosen on the bases of cost, efficacy, market availability and the suggested uses by State experts and the Cooperative Extension Service. Future Agency actions and marketing decisions by registrants or users could change the availability and use of certain alternatives. The analyses were conducted on major use sites/commodities. Analyses on individual sites/commodities which were conducted, considered scenarios involving cancellation of combinations of fungicides. These quantitative analyses provide the basis for the benefits assessment presented here and are available from the EBDC public docket.

Economic impacts from the loss of EBDCs were calculated in terms of

producer impacts and efficiency (societal) impacts. Producer impacts were based on projected changes in production costs, changes in crop yield and reduction in quality. Efficiency impacts were calculated for three crops where there are potential substantial impacts beyond the grower level. Efficiency impacts are defined as society costs, or the loss to society (growers, distributors, consumers or others) of the dollar value of goods and services no longer available as a result of the action.

The limits of this analysis included assumptions which were made based on the limited usage information available, limited comparative data available on yield and quality factors associated with the use of alternative fungicides and non-chemical control measures, and the limited information available on minor use crops. In addition, the Agency assumed that only registered chemical alternatives would be available as chemical replacements for EBDCs if their registrations were cancelled. This is a conservative approach because new fungicides are being developed and tested on many crops for which EBDCs are registered. For some crops such as fennel and many ornamental crops, the Agency has no information on use or on comparative performance. However, the Agency recognizes the potential importance of EBDC use on such minor crops and encourages factual data in support of EBDC benefits or information on other control methods (chemical or otherwise) be submitted in response to this document.

**3. Benefits assessment.** The EBDCs are registered to prevent crop damage caused by fungal pathogens to certain fruit, nut, vegetable, field and ornamental (including turfgrass) crops. They are also registered for use as seed treatments for selected field and vegetable crops, as pre-plant treatments for potato seed pieces, as soil treatments and for home gardens. The sole registrant still holding registrations for use of nabam agricultural sites has recently requested voluntary cancellation of all nabam agricultural food sites; all agricultural use registrations have been suspended for several years and there is no known use of nabam on any agricultural crops. Nabam is registered for use as an antimicrobial pesticide in recirculating water systems, sugar mills, pulp and paper mills, oil recovery systems, adhesives, glues, coatings and paints.

EBDCs are registered for use on over 150 food, non-food and industrial sites. Their broad spectrum of activity and relatively low cost appear to have made



them relatively important and widely used fungicides. EBDCs also have a multi-site mode of action (affecting two or more enzyme systems) and are used in some cases to slow or prevent the development of fungal resistance to other fungicides with more limited modes of action. Total usage of the EBDCs in the United States is estimated at 12 to 18 million pounds active ingredient (a.i.) per year. The largest crop uses by volume of EBDC applied are apples, cucurbits (cucumbers, melons, squash), onions, potatoes, small grains, sweet corn and tomatoes. The largest crop uses in terms of proportion of the crop treated are apples, cucurbits, lettuce, onions, potatoes and spinach.

Cancellation of all currently registered uses is projected to result in first year foregone benefits to producers of approximately \$46 to \$75 million from changes in the costs of disease control and losses due to possibly reduced yields. In addition to those losses, efficiency losses (losses to society of the dollar value of the goods and services

no longer available as a result of the action) are estimated at \$90 to \$305 million per year. Losses are not always borne equally and some severe localized losses may be incurred by current users of EBDC fungicides and by some processors of these growers' crops. Because of the uncertain impact on yield and quality, these estimated losses in production are somewhat more difficult to predict than the projected increased costs of disease control resulting in a larger range in numerical values. The estimated impacts due to yield and quality losses possibly represent an overestimation because in the long term the grower sector may increase acreage to compensate for expected yield losses; such grower losses may be partially offset by increased commodity prices and alternative fungicides may become registered which would replace the EBDCs. In calculating these impacts, it is assumed that only currently registered alternatives or currently accepted non-chemical technology would be available at the time of cancellation. It is expected

that for all uses, the burden would be largely borne by the user and/or consumer.

The above quantified benefits are found on the uses of mancozeb, maneb, metiram and nabam. As discussed earlier, all zineb uses have been suspended, the registrant for the technical product has requested voluntary cancellation of all zineb uses, and to date, no other registrants have accepted the responsibility to support the registrations. Therefore, EPA concludes that the benefits from zineb use are low and no further quantitative assessment of benefits is presented.

4. *Summary of EBDC uses.* A site-by-site summary of EBDC usage on selected food crops, non-food crops and industrial sites is presented in the following Table 2. Estimated economic benefit gained by the use of EBDCs for individual food crops is given in Tables 3 to 5. A full discussion of these uses and estimates of benefits are provided in Chapter III of the EBDC Technical Support Document.

TABLE 2.—SUMMARY OF USAGE OF EBDCS FOR SELECTED SITES

Use	Extent of usage		Key pests	Availability of viable alternative
	AI/Year/1000lbs.	Percent of site treated		
Major Food Crops:				
Apples.....	3,500.....	48.....	Rust..... Scab..... Summer diseases.....	captan benomyl fenarimol triforine triadimefon Petroleum oils propiconazole tridemorph chlorothalonil triphenyltin hydroxide copper fungicides
Bananas.....	53.....	44.....	Sigatoka disease.....	chlorothalonil benomyl anilazine coppers thiophanate-methyl chlorothalonil
Carrots.....	25.....	20-25.....	Alternaria leaf spot..... Cercospora leaf spot.....	chlorothalonil benomyl anilazine coppers thiophanate-methyl chlorothalonil
Celery.....	175.....	27-35.....	Early blight..... late blight.....	chlorothalonil benomyl anilazine coppers thiophanate-methyl chlorothalonil
Cole crops (cabbage, broccoli, cauliflower, Brussels Sprouts).	270.....	10.....	Downy mildew.....	chlorothalonil copper hydroxide ziram chlorothalonil benomyl coppers metalaxyl = chlorothalonil triadimefon
Cranberries.....	15.....	15.....	Alternaria..... Fruit rot..... Twig blight..... Downy mildew..... Gummy stem blight..... Alternaria..... Anthracnose..... Cercospora leaf spot..... Black rot..... Phomopsis..... Downy mildew.....	chlorothalonil copper hydroxide ziram chlorothalonil benomyl coppers metalaxyl = chlorothalonil triadimefon captan benomyl triadimefon ferbam coppers iprodione none Do-
Cucurbits (cucumbers and melons).	2,000.....	40.....	Downy mildew..... Gummy stem blight..... Alternaria..... Anthracnose..... Cercospora leaf spot..... Black rot..... Phomopsis..... Downy mildew.....	chlorothalonil benomyl coppers metalaxyl = chlorothalonil triadimefon captan benomyl triadimefon ferbam coppers iprodione none Do-
Grapes.....	300.....	22.....	Downy mildew..... Alternaria..... Downy mildew.....	chlorothalonil benomyl triadimefon ferbam coppers iprodione none Do-
Leafy greens.....	150 <sup>1</sup> .....	90.....	Downy mildew..... Alternaria..... Downy mildew.....	chlorothalonil benomyl triadimefon ferbam coppers iprodione none Do-
Lettuce.....	540.....	60.....	Downy mildew.....	chlorothalonil benomyl triadimefon ferbam coppers iprodione none Do-
Onions.....	810.....	75.....	Botrytis leaf blight..... Downy mildew..... Purple blotch.....	chlorothalonil metalaxyl + chlorothalonil iprodione



TABLE 2.—SUMMARY OF USAGE OF EBDCS FOR SELECTED SITES—Continued

Use	Extent of usage		Key pests	Availability of viable alternative
	AI/Year/1000lbs.	Percent of site treated		
Peaches & Nectarines.....	32.....	3.....	Brown rot..... Twig blight..... Leaf curl.....	chlorothalonil captan benomyl dichloran
Peanut.....	260.....	4.....	Leaf spot..... Rust.....	benomyl chlorothalonil coppers thiophanate-methyl Ziram
Peppers.....	550.....	56.....	Anthrachnose..... Fruit rot..... Frog eye spot.....	
Potatoes.....	3,544.....	43.....	Early blight..... Late blight.....	chlorothalonil TPTH anilazine coppers carboxin + thiram captan triadimenol triadimefon propiconazole
Seed treatments.....	830.....	8-10.....	Smuts, bunt..... Damping-off..... Seedling blights.....	
Small grains.....	850.....	0.4.....	Leaf spot..... Leaf rust..... Stem rust..... Tan spot..... Glume blotch..... Downy mildew..... White rust..... Helmintho-sporium leaf blight.....	
Spinach.....	80.....	50.....		None
Sweet corn.....	700.....	19.....		-do- chlorothalonil for fresh corn; none for sweet corn grown for processing
Tomatoes.....	1,350.....	25.....	Rust..... Early blight..... Late blight.....	chlorothalonil anilazine coppers ziram
Non-food crops: Ornamental plants.....	150.....	15-20.....	Leaf spots..... Downy mildew..... Rust.....	benomyl chlorothalonil dichloran fenarimol iprodione thiophanate-methyl tisdimofon triforine vinclozolin benomyl chlorothalonil chloroneb iprodione
Turfgrass.....	516.....	<10 <sup>1</sup> 1 <sup>2</sup>	Helmintho-sporium..... Brown patch..... Pythium.....	
Industrial Sites: Paper mills.....	250.....	4.....	Slime-forming Fungi and Bacteria.....	DMT isothiazolone DBNPA MBT isothiazolone Busan
Water cooling.....	N/A <sup>4</sup>	5-20.....	-do- Algae.....	
Sugar mills.....	200.....	50-60.....	Slime-forming fungi and bacteria..... Fungi..... Bacteria..... Spoilage bacteria..... Fungi..... Slime-forming bacteria.....	DBNPA Heat sterilization acrolin DBNPA formaldehyde isothiazolone quaternary ammonium compounds triazine
Oil well.....	<5.....	5.....		

<sup>1</sup> Leafy green have been removed from maneb labels until additional residue data is provided by the registrants and reviewed by the Agency; estimates are given for use when these sites were still on the label.

<sup>2</sup> Estimate for golf courses.

<sup>3</sup> Residential lawns treated by homeowners.

<sup>4</sup> Not available.

5. Analysis of rebuttal comments. Use and benefit related rebuttal comments submitted to the Agency in response to the Initiation of Special Review (PD 1)

issued in July, 1987 were reviewed and the Agency's full responses are provided in the Technical Support Document.

Rebuttal comments are on file in the EBDC Public Docket.

The Agency received approximately 100 responses pertaining to the benefits



of EBDC fungicides. Most of these comments were undocumented testimonials stating that the EBDCs were useful in controlling diseases on a wide variety of agricultural crops, were cost effective compared to alternatives, prevented potential yield and quality reduction on many crops, and aided in prevention of significant resistance problems. Comments submitted by manufacturers of EBDC products used on agricultural crops were incorporated, where appropriate, into the benefits assessment presented in the Technical Support Document.

**Rebuttal comment.** Pennwalt Chemical Corporation submitted an analysis of economic welfare impacts of a maneb cancellation.

**Agency response.** The Agency agrees with the approach used in the submission to assess the economic impact of cancellation of these EBDC products. However, the analysis was dependant on the input data and assumptions made about the effect that maneb and alternative pesticides have on the production of a given commodity. The specific data that are used to reflect the market characterization also are crucial. The Agency concludes that the submission relied on comparative efficacy and product performance assumptions that were not well documented, as well as estimates of supply and transmission elasticities that do not appear to be plausible. Therefore, the specific quantitative results cannot be accepted as correct on their face value.

**Rebuttal comment.** Alco Chemical Corporation and Vinings Industries submitted benefits information on industrial uses of nabam. They concluded that for cooling water systems, pulp/paper mills and cane/sugar beet mills, nabam products are more cost-effective (dollars per treated volume of protected material) than were alternative chemicals. For petroleum recovery operations, they found alternative chemicals to be more cost-effective on a comparative basis.

**Agency response:** The Agency's analysis found that on all sites analyzed, alternatives to nabam were more cost-effective. These differences can be accounted for by different assumptions on likely treatment rates, probable alternative chemicals used and the use of wholesale product prices (Alco and Vinings) as opposed to end-user cost estimates.

### III. Risk/Benefit Analysis and Proposed Regulatory Decision

FIFRA requires the Agency to weigh the risks against the benefits of the use of a pesticide in order to determine

whether continued registration would cause unreasonable adverse effects on the environment. This section identifies the regulatory options available to the Agency to reduce the unreasonable risks from the registered uses of the EBDCs. Each option has been evaluated for its impact on the risks and benefits of the registered uses of the EBDCs and the most appropriate regulatory options have been proposed. There are four basic options for regulating the uses of EBDC pesticides:

Option 1—Continuation of Registration Without Changes

Option 2—Continuation of Registration with Modifications to the Terms and Conditions of Registration

Option 3—Partial Cancellation

Option 4—Cancellation of All Registrations

Option 1, Continuation of Registration without Change and Option 4,

Cancellation of All Registrations, are at the opposite ends of the risk/benefit spectrum. Adoption of Option 1 would be appropriate when the Agency has concluded that the level of risk is reasonable in light of the pesticide's benefits and that further risk reduction measures are not necessary to assure that the use of the pesticide meets the standard for continued registration. Adoption of Options 3 or 4, Partial or Total Cancellation, would be appropriate when the Agency has concluded that the risks outweigh the benefits for some or all uses, respectively, and that these risks cannot be mitigated to a reasonable level, in light of the benefits, by any other measure short of cancellation.

Cancellation may affect all uses of a compound, only specific uses or specific formulations, or specific application methods. Option 2 is appropriate when the risks of a pesticide use can be reduced to a level where the benefits of use outweigh the risks. This risk reduction is accomplished by modifying the terms and conditions of the pesticide's registration. These modifications, which are expressed through the pesticide labeling are, for the most part, changes in the way the pesticide is used or the amount of the pesticide that may be used. These changes are designed to reduce exposure to the pesticide and thereby reduce or eliminate the risk from the pesticide. Risk reduction measures were considered and evaluated for their potential effectiveness and feasibility.

#### A. Regulatory Options Considered

1. *Measures to reduce dietary exposure.* Amounts of pesticide residues on food crops are affected by such factors as quantity of active ingredient used, the solvents used for dilution,

mode and schedule of application, preharvest interval, and soil and weather conditions. Several measures were considered as means by which potential dietary exposure to the EBDCs and ETU through residues on food crops might be reduced. The Agency specifically requests comments on the analysis presented below and what measures the Agency should consider for reducing risks from use on various crops.

a. *Preharvest interval.* The preharvest interval is the number of days that must elapse between the final application of a pesticide and actual harvest of the crop. Lengthening this interval provides more time for dissipation of residues before crops are harvested and ultimately consumed. Additionally, lengthening the preharvest interval can serve as a means of lowering tolerances. The practicality of extending the preharvest interval for the EBDCs cannot be evaluated at this time due to lack of efficacy data, but the Agency believes that extending the preharvest interval could be equivalent to cancellation on some crops because the crop could be unprotected from disease during the extended preharvest interval.

b. *Modify application practices.* Three modified application practices were considered to reduce EBDC and ETU exposure and risk through reduction in crop residues: (1) reducing the amount of active ingredient in the formulations, (2) reducing the amount of formulation applied per season and (3) reducing the amount of active ingredient applied per acre. Use rates, and the number of applications per season are based on field evaluations carried out under various degrees of disease pressure, varying environmental conditions and in diverse geographic regions. The limited field trials available comparing efficacy at different application rates of EBDCs were reviewed by the Agency. These trials indicate that under the conditions tested, the higher rates tested tended to be more efficacious and for the very few trials that included a range of application rates and yield data, the higher rates seemed to provide higher yields. Fewer applications and lower rates can be used in some instances where predictive management models are available which take into account local climatic and disease conditions. However, such models are currently available for only a small number of crops. Therefore, based on the information available, the Agency believes that mandated modification in application practices could potentially adversely impact the efficacy of EBDCs as plant disease control agents and



could, for some crops, be equivalent to cancellation in terms of potential economic impact.

2. *Measures to reduce exposure to applicators, mixer/loaders and fieldworkers.* The potential risks to persons mixing and loading EBDC formulations, applying the pesticide to crops and working in the fields treated with the pesticides were estimated and are summarized in the Technical Support Document. Specific risk reduction measures were considered by the Agency.

a. *Protective clothing.* Dermal and inhalation exposure to the EBDCs and ETU can occur when mixing, loading, maintaining application equipment, during application and at the time field workers enter treated fields to cultivate, apply other pesticides and harvest.

The Agency has evaluated the level of risk reduction gained and the costs of requiring protective clothing for all agricultural workers using EBDC fungicides. Protective clothing, comprised of coveralls worn over a long-sleeved shirt and long pants, chemical-resistant gloves, shoes, socks, goggles or a face shield and a chemical-resistant apron is expected to reduce dermal exposure to mixer/loaders by 40 percent. Protective clothing, comprised of coveralls worn over a long-sleeved shirt and long pants, chemical-resistant gloves, shoes, socks and goggles or a face shield is expected to reduce exposure to applicators by 65 percent. The coveralls are not intended to be chemical-resistant. Since inhalation exposure is estimated to be 1 to 2 percent of the total exposure and therefore considered negligible, the need for respirators was not considered.

The costs of protective clothing for workers (mixers, loaders and applicators) applying maneb, mancozeb and metiram to agricultural crops are estimated to be \$25 to \$37 per worker for approximately 30,000 to 40,000 workers or \$0.75 to \$1.5 million in total. However, the Agency believes that most persons applying EBDC fungicides probably use other pesticides which require the use of similar or even more restrictive protective equipment. Therefore, the Agency believes that the actual cost of requiring protective clothing of all agricultural workers applying EBDCs is considerably lower than \$1.5 million.

b. *Reentry intervals.* Establishing a reentry interval would allow time for further breakdown of EBDC residues into ETU and ETU into metabolites or compounds of less concern. EBDCs meet both the chronic toxicity and exposure criteria specified in 40 CFR 158.390 for reentry data. The Agency considered requiring a reentry interval for all

agricultural workers using EBDC fungicides. Presently, the Registration Standards for maneb, mancozeb, metiram and nabam specify an interim 24-hour reentry interval be placed on labels of all maneb, mancozeb, metiram and nabam end-use products registered for agricultural use. This interim level will remain in effect until dislodgeable foliar residue data required in the Registration Standards, and as required in the March 1989 EBDC Data Call-In are submitted, reviewed and the Agency announces any change in this reentry interval. These data are due to EPA in July 1990. Since the Agency does not currently have data on degradation of the EBDCs or ETU over time, it has no additional basis on which to propose a specific reentry interval other than the interim reentry interval previously discussed.

The Agency has few data available on the costs imposed on agriculture from requiring a reentry interval for agricultural workers. However, the Agency believes that there would be little if any impact from a 24-hour reentry interval because workers could reenter a treated area within 24-hours if they wore the protective clothing required for applicators.

3. *Measures to reduce industrial worker exposure.* The nabam Registration Standard specified protective clothing requirements of long-sleeved shirts, long pants, chemical-resistant gloves, shoes, socks and goggles or a face shield while mixing, loading or applying as well as a chemical-resistant apron when mixing and loading. Although low MOSs/MOEs for thyroid effects were calculated for nabam's use in sugar and paper mills, they were calculated based on surrogate agricultural data which may yield higher exposure estimates. Because the surrogate data may overestimate exposure, the Agency believes that once nabam-specific exposure data are submitted, all thyroid MOSs/MOEs for nabam may increase above 100.

#### B. Risk/benefit Analysis of Regulatory Options

1. *Analysis of options—Option 1—Continuation of registration without changes.* If the registrations for mancozeb, maneb, metiram and nabam for use on food crops, non-food crops and industrial sites were continued without restriction, the estimated total upper-bound ETU dietary risk would be  $10^{-4}$  with cumulative forgone benefits of \$46 to \$75 million in producer impacts and \$90 to \$305 million in efficiency impacts. This risk would be higher if uses of zineb also were allowed to continue. The total risk was estimated

by multiplying the estimated exposure by a carcinogenic potency factor, the  $Q_1^*$ . Exposure was estimated using anticipated residue data, percent of crop treated data, and food consumption data from the USDA 1977-78 Nationwide Food Consumption Survey. (See Unit II.A.3.)

Also, there would be low MOSs/MOEs (below 100) for thyroid and developmental effects and/or high cancer risks for mixer/loaders and applicators using maneb on grapes and commercial ornamentals, and on homeowner turf, fruit trees, vegetables and ornamentals; mancozeb on homeowner turf and fruit trees; and nabam in sugar and paper mills. Benefits are low for these uses because of the availability of alternatives.

Option 2—Continuation of registrations with modifications to the terms and conditions of registration. Because of the lack of data, the Agency does not know whether amending the terms and conditions of registration by extending pre-harvest intervals or modifying application rates or practices would reduce the total dietary risk to a significant extent. The Agency believes that such modifications possibly may reduce the versatility and efficacy of EBDC products and thereby reduce their potential benefits. The March 1989 Data Call-In Notice required use information on the EBDCs which was submitted in August, 1989. Information on the percent of crop treated was used along with other available data in conducting the analyses used for the preliminary determination; most of the submitted data on comparative efficacy previously were available to the Agency, but any new information will be included in the final decision. This information and any other available information will be used to further refine the risk estimates for the Agency's Final Determination PD 4. Users and other groups are also encouraged to submit data demonstrating that application rate, frequency or other exposure variables can be modified to reduce overall exposure and still retain the efficacy of the products.

When estimating exposure to mixer/loader/applicators using EBDCs on agricultural sites, the Agency took into consideration protective clothing comprised of coveralls worn over a shirt and pants, chemical-resistant gloves, shoes, socks, goggles or a face shield for applying plus a chemical-resistant apron when mixing and/or loading EBDC pesticides. With incorporation of these additional protective clothing requirements, a few maneb MOSs/MOEs remained under 100: grapes and



commercial ornamentals. The estimated carcinogenic risk to mixer/loader/applicators from the risk of maneb products used on commercial ornamentals is  $10^{-3}$ . No additional protective clothing or equipment appear practical to reduce these exposures further.

The Agency finds it impractical to enforce a requirement for such protective clothing for homeowner uses as the Agency believes that homeowners are not likely to go to the added expense of buying, for example, gloves and goggles or a face shield considering the small amount of EBDC products used on home gardens and turf. MOS/MOEs for homeowners applying maneb on turf are below 100. Estimated carcinogenic risks to homeowners using maneb are greater than  $10^{-6}$  for all uses; estimated risks to homeowners using mancozeb are greater than  $10^{-6}$  for turf and fruit tree uses.

OSHA regulations, 29 CFR 1910.132, already require industrial workers to use protective clothing and protective clothing requirements specified in the nabam Registration Standard are on nabam labels. MOS/MOEs for workers using nabam in sugar and paper mills are estimated to remain below 100 even when protective clothing is used. However, these estimates are based on exposure estimates which may need some refinement. The Agency's March 1989 EBDC Data Call-In Notice will provide nabam dermal exposure data for oil well drilling fluids and paper and sugar mills. These data are due to be received in March, 1990. To the extent that these data are available, they will be used to further refine the risk estimates for the Agency's Final Determination PD 4.

The interim 24-hour reentry interval for agricultural workers which is specified in the Registration Standards for maneb, mancozeb, metiram and nabam should reduce exposure of

agricultural workers to EBDCs and ETU without imposing significant costs to the agricultural industry. Workers in greenhouses or field situations can reenter the treated area if they wear clothing specified for applicators. EBDC labels for products used on golf courses state that workers can reenter the treated area after the spray has dried. The Agency expects to receive dislodgeable foliar residue data in July 1990 which should allow the Agency to fully evaluate this risk reduction measure and determine whether any refinements are necessary.

**Option 3—Partial cancellation.** This option would propose cancellation of certain food and non-food uses. The goal of the option would be to reduce aggregate risks from EBDCs to a level that provides an appropriate overall balance of risks and benefits. In evaluating which uses should be cancelled, the Agency initially focussed on those uses which registrants seem unwilling to support. At the time this document was signed, no registrant of zineb has indicated an interest in supplying the outstanding data for this chemical. All zineb uses currently are suspended (and have been for some time) and the only technical registrant has requested that the Agency cancel its registrations. Given the apparent lack of support for zineb, which the Agency believes is evidence of a lack of benefits provided by zineb, zineb uses were deemed least deserving of retention. Thus, under this option, the Agency would propose to cancel all zineb uses.

The Agency next turned to an examination of the 55 registered uses of maneb, mancozeb, and metiram. As noted earlier, the major technical registrants of mancozeb, maneb and metiram, recently requested that the Agency delete 42 of the 55 uses from their registrations. Maneb would be registered for use on almonds, bananas, potatoes, sugar beets and sweet corn;

mancozeb would be registered for use on asparagus, bananas, cranberries, figs (caprifig only), grapes, onions, peanuts, potatoes, sugar beets, sweet corn, tomatoes and wheat; and metiram would be registered for use on potatoes. The registrants' action would decrease estimated upper-bound, carcinogenic risks from  $4 \times 10^{-4}$  to  $2 \times 10^{-5}$ . This action effectively places these 42 uses in a similar situation to the zineb uses—uses which appear to have been dropped by industry while technically remaining on the registrations of various formulators—and thus, under this option, these 42 uses would be proposed for cancellation.

Therefore, following the registrants' requested deletion of 42 uses, the Agency's analysis focussed on the risks and benefits of the 13 crops retained by the registrants. These 13 crops have an estimated upper-bound, cumulative excess lifetime risk of  $2 \times 10^{-5}$  and a cumulative benefit of \$14 to \$27 million in producer impacts. The Agency considered a risk-benefit balancing of each crop to determine whether the estimated dietary risk is reasonable. Using this analysis, EPA identified three crops (potatoes, tomatoes and bananas) with an unfavorable risk-benefit balance and accordingly, under this option, EPA would propose to cancel these three crops. This action would reduce the estimated lifetime cancer risk to  $3 \times 10^{-6}$  and would retain the maximum amount of benefits. The following Table 3 summarizes the crops which would be proposed for cancellation and retention under an option which assumed only the 13 registrant retained crops remain registered.

In summary, under this option the Agency would propose to cancel all uses of zineb and 45 uses of mancozeb, maneb and metiram reducing estimated upper-bound, lifetime cancer risk to  $3 \times 10^{-6}$  and retaining benefits of \$13 to \$26 million.

TABLE 3.—ESTIMATED RISKS AND BENEFITS OF CROPS WHICH WOULD BE PROPOSED FOR CANCELLATION AND RETENTION

Food crop	Estimated excess Carcinogenic risk	Benefits
<b>A. 13 Crops Proposed to be Retained by Major EBDC Registrants:</b>		
<b>Proposed for Retention by EPA:</b>		
Almonds	$7 \times 10^{-8}$	Not enough data to quantify; potential impacts
Asparagus	$2 \times 10^{-9}$	-do-
Caprifigs	0	-do-
Corn, sweet	$3 \times 10^{-7}$	\$2.1 to \$2.5 million producer impacts
Cranberry	$5 \times 10^{-7}$	\$0.1 million producer impacts
Grapes	$9 \times 10^{-7}$	\$1 to \$3 million producer impacts
Onions	$5 \times 10^{-7}$	\$6.5 million producer impacts
Peanuts	$2 \times 10^{-8}$	\$2.4 million producer impacts
Sugar Beet	$1 \times 10^{-6}$	Not enough data to quantify; potential impacts
Wheat	$1 \times 10^{-7}$	\$1.8 to \$11.7 million producer impacts
Total.....	$3 \times 10^{-6}$	\$13 TO \$26 million in producer impacts
<b>Proposed for Cancellation by EPA:</b>		
Banana	$1 \times 10^{-6}$	\$0.3 million producer impacts in U.S.



TABLE 3.—ESTIMATED RISKS AND BENEFITS OF CROPS WHICH WOULD BE PROPOSED FOR CANCELLATION AND RETENTION—Continued

Food crop	Estimated excess Carcinogenic risk	Benefits
Potatoes	$2 \times 10^{-6}$	\$0.4 million producer impacts
Tomato	$2 \times 10^{-6}$	\$0.1 million producer impacts
B. Crops Proposed to be Deleted from Registrations by Major EBDC Registrants which also are proposed for cancellation by EPA:		
Apples	$1 \times 10^{-6}$	\$0.9-\$12.3 million producer impacts
Apricot	$7 \times 10^{-7}$	Not enough data to quantify; minimal impacts expected
Barley	$3 \times 10^{-7}$	\$0.3 to \$2.1 million producer impacts
Beans	$3 \times 10^{-6}$	\$1.9 to \$2.1 million producer impacts
Beans, Lima	$2 \times 10^{-6}$	\$0.7 million producer impacts
Broccoli	$1 \times 10^{-6}$	No impact expected
Brussel Sprouts	$4 \times 10^{-7}$	-do-
Cabbage	$1 \times 10^{-6}$	-do-
Cantaloupe	$3 \times 10^{-7}$	\$0.3 million producer impacts
Casaba melons	$6 \times 10^{-8}$	Not enough data to quantify; impacts expected
Crenshaw melons	$<1 \times 10^{-10}$	-do-
Carrot	$2 \times 10^{-6}$	\$0.13 million producer impacts
Cauliflower	$3 \times 10^{-7}$	No impact expected
Celery	$2 \times 10^{-6}$	\$1.3 to \$4 million efficiency impacts
Collards	$1 \times 10^{-6}$	Not enough data to quantify; impacts expected
Corn, field	$7 \times 10^{-8}$	Not enough data to quantify; no impact expected
Cotton	$6 \times 10^{-8}$	-do-
Crabapple/quince	$6 \times 10^{-7}$	-do-
Cucumbers	$9 \times 10^{-7}$	\$4.0 to \$4.9 million producer impacts
Eggplant	$3 \times 10^{-6}$	Not enough data to quantify; potential impacts
Endive	$3 \times 10^{-6}$	-do-
Fennel	$1 \times 10^{-6}$	Not enough data to quantify; no impacts expected
Honeydew	$1 \times 10^{-7}$	Not enough data to quantify; melon impacts expected
Lettuce	$3 \times 10^{-6}$	\$40 to \$204 million efficiency impacts
Kale	$7 \times 10^{-7}$	Not enough data to quantify; impacts expected
Kohlrabi	$1 \times 10^{-6}$	-do-
Mustard green	$2 \times 10^{-6}$	-do-
Nectarines	$1 \times 10^{-6}$	Negligible producer impacts
Oats	$6 \times 10^{-8}$	\$0.1 to \$0.5 million producer impacts for oats & rye
Papaya	$2 \times 10^{-7}$	Not enough data to quantify; no impacts expected
Peaches	$4 \times 10^{-8}$	\$15,000 producer impacts
Pear	$2 \times 10^{-6}$	Not enough data to quantify; minimal impacts expected
Pecan	$4 \times 10^{-10}$	-do-
Peppers	$3 \times 10^{-6}$	\$49 to \$98 million in efficiency impacts
Pineapple	$<1 \times 10^{-10}$	Not enough data to quantify; potential impacts
Pumpkin	$1 \times 10^{-6}$	\$77,000 producer impacts
Rhubarb	$7 \times 10^{-7}$	Not enough data to quantify; no impacts expected
Rye	$4 \times 10^{-8}$	\$0.1 to \$0.5 million producer impact for oats & rye combined
Spinach	$2 \times 10^{-6}$	\$19 million producer impacts
Squash	$3 \times 10^{-7}$	\$3.4 to \$4.8 million producer impacts
Turnip	$2 \times 10^{-6}$	Not enough data to quantify; impacts expected
Watermelon	$2 \times 10^{-6}$	\$0.8 million producer impacts
Total.....	$3 \times 10^{-4}$	\$32 to \$58 million in producer impacts and \$90 to \$305 million in efficiency impacts

If the mancozeb, maneb and metiram registrants had not deleted 42 of 55 registered uses, the Agency would have pursued regulatory action based on a risk-benefit analysis of the 55 crop universe. While EPA believes it is appropriate to consider only the 13 remaining uses in its proposed action, the Agency is presenting its 55 crop analysis to (1) provide a fuller description of the risks and benefits of the EBDCs and (2) enable all affected parties to have the best information possible for purposes of commenting on the Agency's analysis and proposed action.

In assessing the risks and benefits of the 55 crops, 10 crops yielded an estimated upper-bound, cumulative lifetime risk of  $1 \times 10^{-7}$  and benefits of

\$2.4 million. The crops are: almonds, asparagus, casaba melons, crenshaw melons, eggplant, endive, figs, peanuts, pineapple and pumpkin. Since these crops have some benefit and very low risk, they would have been proposed for retention had the registrants taken no action. The remaining crops were then ranked in order of lowest risk/highest benefit or cost effectiveness ratios (See Technical Support Document). The two crops with the highest benefits, lettuce and peppers, each have an estimated risk of  $3 \times 10^{-6}$ . The benefits from lettuce are \$40 to \$204 million in efficiency impacts and the benefits from peppers are \$49 to \$98 million in efficiency impacts. However, if both crops were retained, the cumulative estimated dietary risk from the two crops alone is

$6 \times 10^{-6}$ . Of the two, lettuce has the higher estimated benefit. The other two crops which have a favorable risk/benefit ratio are onions (with an estimated excess risk of  $5 \times 10^{-7}$  and \$6.5 million in producer impacts) and cucumbers (with an estimated risk of  $9 \times 10^{-7}$  and \$4 to \$4.9 million in producer impacts). The cumulative estimated upper-bound lifetime risk from the ten negligible risk crops as well as lettuce, onions and cucumbers is  $5 \times 10^{-6}$ . The cumulative estimated benefits are \$13 to \$14 million in producer impacts and \$40 to \$204 million in efficiency impacts.

If peppers were included, the total estimated risk would be  $8 \times 10^{-6}$ . Total estimated benefits would be \$13 to \$14 million in producer impacts and \$89 to



\$302 million in efficiency impacts. Even though the individual benefits for peppers were high, the Agency was concerned that the risk contribution of peppers to the aggregate dietary risk was excessive.

The Agency also considered retaining spinach since the benefits are high with

an estimated 70 percent of the winter spinach crop potentially affected and economic impacts projected to be \$19 million. However, the Agency decided that although benefits appeared to be high for this relatively minor crop, the estimated ETU dietary risk of  $10^{-6}$  for spinach outweighed the benefits.

Forty-two food crops or crop groupings would have been proposed for cancellation in the absence of the registrants' action. The following Table 4 summarizes the estimated dietary risks and benefits of the food crops which would have been proposed for cancellation.

TABLE 4.—ESTIMATED RISKS AND BENEFITS OF EBDC CROPS WHICH WOULD HAVE BEEN PROPOSED FOR CANCELLATION IN THE ABSENCE OF REGISTRANT ACTION

Food crop	Estimated excess carcinogenic risk	Benefits
Apples	$1 \times 10^{-4}$	0.3 to \$12.3 million producer impacts
Apricot	$7 \times 10^{-6}$	Not enough data to quantify; minimal impacts expected
Banana	$1 \times 10^{-6}$	0.3 producer impacts in U.S.
Barley	$3 \times 10^{-7}$	\$0.3 to \$2.1 million producer impacts
Beans	$3 \times 10^{-6}$	\$1.9 to \$2.1 million producer impacts
Beans, Lima	$2 \times 10^{-6}$	0.7 million producer impacts
Broccoli	$1 \times 10^{-6}$	No impact expected
Brussel Sprouts	$4 \times 10^{-7}$	-do-
Cabbage	$1 \times 10^{-6}$	-do-
Cantaloupe	$3 \times 10^{-7}$	\$0.3 million producer impacts
Carrot	$2 \times 10^{-6}$	\$0.13 million producer impacts
Cauliflower	$3 \times 10^{-7}$	No impact expected
Celery	$2 \times 10^{-6}$	\$1.3 to 3.4 million efficiency impacts
Collards	$1 \times 10^{-6}$	Not enough data to quantify; impacts expected
Corn, field	$7 \times 10^{-6}$	Not enough data to quantify; no impact expected
Corn, sweet	$3 \times 10^{-7}$	\$2.1 to \$2.5 million producer impacts
Cotton	$6 \times 10^{-6}$	Not enough data to quantify; no impact expected
Crabapple/quince	$6 \times 10^{-7}$	-do-
Cranberry	$5 \times 10^{-7}$	\$0.1 million producer impacts
Fennel	$1 \times 10^{-6}$	Not enough data to quantify; no impacts expected
Grapes	$9 \times 10^{-7}$	\$1 to \$3 million in producer impacts
Honeydew melons	$1 \times 10^{-7}$	Not enough data to quantify; impacts expected
Kale	$7 \times 10^{-7}$	-do-
Kohlrabi	$1 \times 10^{-6}$	-do-
Mustard greens	$2 \times 10^{-6}$	-do-
Nectarines	$1 \times 10^{-6}$	Negligible producer impacts
Oats	$6 \times 10^{-6}$	\$0.1 to \$0.5 million producer impacts for oats & rye
Papaya	$2 \times 10^{-7}$	Not enough data to quantify; no impacts expected
Peaches	$4 \times 10^{-6}$	<\$15,000 producer impacts
Pear	$2 \times 10^{-6}$	Not enough data to quantify; minimal impacts expected
Pecan	$4 \times 10^{-10}$	-do-
Peppers	$3 \times 10^{-6}$	\$49 to \$98 million in efficiency impacts
Potatoes	$2 \times 10^{-6}$	\$0.4 million producer impacts
Rhubarb	$7 \times 10^{-7}$	Not enough data to quantify; no impacts expected
Rye	$4 \times 10^{-6}$	\$0.1 to \$0.5 million producer impact for oats & rye combined
Spinach	$2 \times 10^{-6}$	\$19 million producer impacts
Squash	$3 \times 10^{-7}$	\$3.4 to \$4.8 million producer impacts
Sugar Beet	$1 \times 10^{-6}$	Not enough data to quantify; potential impacts
Tomato	$2 \times 10^{-6}$	\$0.1 million producer impacts
Turnip	$2 \times 10^{-6}$	Not enough data to quantify; impacts expected
Watermelon	$2 \times 10^{-6}$	\$0.8 million producer impacts
Wheat	$1 \times 10^{-7}$	\$1.6 to \$11.7 million producer impacts
Total	$4 \times 10^{-4}$	\$33 to \$61 million in producer impacts and \$50 to \$101 million in efficiency impact

The following Table 5 summarizes the estimated dietary risks and benefits of

the food crops which would have been

proposed for retention had the registrants taken no action.

TABLE 5.—Estimated Risks and Benefits of EBDC Crops which would have been Proposed for Retention in the Absence of Registrant Action

Food crop	Estimated excess carcinogenic risk	
Almonds	$7 \times 10^{-9}$	Not enough data to quantify; potential impacts
Asparagus	$2 \times 10^{-9}$	-do-
Caprifigs	0 <sup>1</sup>	-do-
Casaba melons	$6 \times 10^{-9}$	Not enough data to quantify; impacts expected
Crenshaw melons	$<1 \times 10^{-10}$	-do-
Cucumbers	$9 \times 10^{-7}$	\$4.0 to \$4.9 million producer impacts
Eggplant	$3 \times 10^{-8}$	Not enough data to quantify; potential impacts
Endive	$3 \times 10^{-8}$	-do-



TABLE 5.—Estimated Risks and Benefits of EBDC Crops which would have been Proposed for Retention in the Absence of Registrant Action—Continued

Food crop	Estimated excess carcinogenic risk	
Lettuce	$3 \times 10^{-6}$	\$40 to \$204 million efficiency impacts
Onions	$5 \times 10^{-7}$	\$6.5 million producer impacts
Peanuts	$2 \times 10^{-6}$	\$2.4 million producer impacts
Pineapple	$< 1 \times 10^{-10}$	Not enough data to quantify; potential impacts
Pumpkin	$1 \times 10^{-6}$	\$77,000 producer impacts
Total	$5 \times 10^{-6}$	\$13 to \$14 million in producer impacts and \$40 to \$204 million in efficiency impacts

<sup>1</sup> Registrant has voluntarily cancelled use directly on food crop; only use remaining is on caprifig which is unlikely to result in any residue.

For all crops proposed for cancellation and particularly for lettuce, peppers and spinach, the Agency requests comments on its risk/benefit analysis. In addition, EPA seeks information on whether changes in use practices could reduce risk to an acceptable level.

For risks to mixer/loaders and applicators, the Agency would also propose cancellation of all sites associated with unacceptable MOSs/MOEs (those under 100 with low benefits) after incorporation of additional protective clothing requirements for workers and without additional protective clothing for homeowners which EPA considers impractical. In these cases, EPA believes risks outweigh benefits. In addition, the Agency would propose cancellation of all sites with estimated upper-bound, carcinogenic risks to mixer/loader/applicators exceeding  $10^{-4}$  for workers after incorporation of additional protective clothing and exceeding  $10^{-6}$  for homeowners without additional protective clothing. Additional protective clothing requirements are not considered practical for homeowners. Registrations bearing the following uses would be affected: (1) maneb on homeowner vegetables, ornamentals, fruit trees and turf sites and on grapes and commercial ornamentals; (2) mancozeb on homeowner fruit trees and turf sites; and (3) nabam in sugar and paper mills. Again, the Agency believes risks outweigh benefits.

**Option 4—Cancellation of all registrations.** If the registrations of the EBDCs for all food uses were cancelled, all dietary carcinogenic risks to persons from the consumption of EBDC-treated foods would be eliminated and all developmental and thyroid risks to mixer/loader/applicators from the use of EBDCs on food crops would be eliminated. The cancellation of the registrations for maneb, mancozeb, metiram, and nabam would have an estimated \$46 to \$75 million in producer impacts and \$90 to \$305 million in efficiency impacts the first year following cancellation. Benefits from

zineb are assumed to be minimal based on the lack of support for these uses. With full cancellation, EPA also would revoke all food tolerances so that residues in imported as well as domestic crops would be unlawful. Under this option, uses on many crops with negligible estimated risks ( $10^{-10}$  to  $10^{-7}$ ) would be treated the same as uses on crops with high estimated risks. In addition, cancellation of EBDC registrations on many minor crops with no alternatives would result in some growers experiencing severe impacts.

If registrations of the EBDCs for non-food crops, commercial, homeowner and industrial uses were cancelled, all mixer/loader/applicator carcinogenic, thyroid and developmental risks from EBDCs or ETU exposure would be eliminated. Cancellation of maneb, mancozeb, metiram, and nabam on these use sites would have a \$5 to \$15 million impact in the first year following cancellation.

#### C. Proposed Regulatory Actions

The Agency believes that the estimated aggregate risk from all of the EBDCs is unacceptably high. The level of estimated benefits, \$46 to \$75 million in producer impacts and \$90 to \$305 million in efficiency impacts in the first year, cannot justify an estimated dietary risk in the range of  $10^{-4}$ . At the same time, the Agency does not think that full cancellation is warranted in light of the estimated benefits of continued maneb, mancozeb and metiram use on some crops, and the low estimated carcinogenic, developmental and thyroid risks associated with certain of the individual crops. Consequently, the Agency proposes a partial cancellation of EBDC registrations combining options 2 and 3—partial cancellation of registrations and continuation of other registrations with modifications to the terms and conditions of registration. The goal of this proposal is to reduce aggregate risks from EBDCs to a level that provides an appropriate overall balance of risks and benefits. Specific

proposed regulatory actions are outlined below.

Unless new data or information demonstrate that more immediate action is required, EPA plans not to issue a final decision until the Agency has had the opportunity to examine market basket data due to be submitted in September 1990. Dietary risk estimates presented in this document were based on field residue data which may overestimate actual dietary risk. The Agency believes that a well designed and properly conducted food residue monitoring study may more accurately estimate ETU residues "at the dinner plate" and could support risk estimates of as much as one or two orders of magnitude lower than our current risk estimates for some crops, at which point estimated benefits could exceed risks for additional food crops than those currently proposed for retention.

Due to lack of more refined data, developmental and thyroid MOSs/MOEs for mixer/loaders and applicators were based on upper-bound exposure estimates. Although many of the resulting MOSs/MOEs are of concern ( $< 100$ ), and risks are unreasonable because benefits are low, the Agency believes that actual dermal exposure and absorption data may increase these MOSs/MOEs. However, as to both dietary and mixer/loader/applicator risk issues, in the absence of data sufficient to demonstrate lower exposure, currently available data will be used to make the Final Determination risk estimates. In that event, as discussed in this document, estimated risks outweigh estimated benefits for many uses.

Due to the assumptions surrounding dietary and mixer/loader/applicator risks, the Agency has required additional data through FIFRA section 3(c)(2)(B) to further refine risk estimates. The Agency tentatively plans to issue the PD 4 in the spring of 1991 to allow review and consideration of new exposure data that should become available which the Agency currently believes could result in a more refined



risk/benefit assessment of the EBDCs and ETU.

1. *Food crop uses.* In deciding which food uses to retain, the Agency considered a range of factors. Where the market situation has indicated a lack of support for a particular use, the Agency is proposing to cancel that use without further detailed analysis. Cancellation is necessary despite the actions by the technical registrants because the uses the technical registrants have requested deleted remain on the registrations of various formulators. For uses which the technical registrants have retained, the Agency has examined the risks and benefits of each use, to the extent that information is available, in evaluating which uses should be cancelled and which retained.

All zineb uses and the 42 uses dropped by the technical registrants of mancozeb, maneb, and metiram are proposed for cancellation on the basis of unacceptable risk and a lack of support by registrants. It will be difficult for end use formulators to retain the uses dropped by the technical registrants. Not only will the formulators need to arrange an alternate source of supply, but they will also need to generate a substantial amount of data to support registration of these uses. The Agency believes the action taken by the technical registrants has altered the market sufficiently that it is appropriate to consider that only the 13 crops will remain. Thus, the Agency's proposed cancellation, in a practical sense, reflects what has, by and large, already taken place.

Cancelling all zineb uses and the 42 uses of mancozeb, maneb and metiram dropped by the registrants leaves 13 food crop uses: tomatoes, potatoes, bananas, grapes, wheat, cranberries, onions, sugar beets, sweet corn, peanuts, almonds, asparagus and figs. These crops have an estimated upper-bound, cumulative lifetime risk of  $2 \times 10^{-6}$  and an estimated cumulative benefit of \$14 to \$27 million in producer impacts (see Table 3).

The Agency believes the level of estimated upper-bound risk associated with these 13 crops outweighs the associated benefits. Thus, the Agency finds that action beyond that taken by the registrants is necessary to reduce risks to acceptable levels. The Agency considered a risk-benefit balancing of each crop to determine which crops had estimated benefits which exceeded the estimated risks and yielded an acceptable cumulative dietary risk. The Agency determined that 10 crops met this test. These are: grapes, wheat, cranberries, onions, sugar beets, sweet corn, peanuts, almonds, asparagus and

figs. These 10 crops have an estimated upper-bound, cumulative risk of  $3 \times 10^{-6}$  and cumulative benefits of \$13 to \$26 million in producer impacts. Therefore, the Agency proposes to cancel three more crops in addition to the 42 already discussed. These three crops are tomatoes, potatoes and bananas. Tomatoes have an estimated risk of  $2 \times 10^{-6}$  and estimated benefits of only \$0.1 million. Potatoes and bananas each have estimated risks in the  $1 \times 10^{-6}$  range but less than \$0.5 million in estimated benefits. None of the three crops appears to have sufficient benefits to exceed these levels of estimated risks, particularly when it is recognized that these risks need to be added to risks from other crops to estimate total dietary risk.

In determining the appropriate regulatory action, the Agency considered the interim dietary risk while the Special Review is being conducted. When estimating excess lifetime cancer risk over a 70 year lifespan, EPA calculates only one risk number (for the general population). This estimate takes into account that a person moves from infancy through childhood to adulthood, and that consumption patterns change over these different stages. However, when considering a time period of just a few years, EPA calculates risk numbers for both the overall population and the most sensitive subpopulations. These estimates reflect potential lifetime cancer risks resulting from exposure during the shorter time period, and take into account the different types and amounts of food typically consumed by each subgroup.

EPA has estimated the interim dietary risks for three groups—overall population, non-nursing infants and younger children (1 to 6 years of age). In estimating the risks, the Agency used the following assumptions: (1) the time period to complete the Special Review will be two years (the PD 4 is now scheduled for the spring of 1991); (2) no zineb use will occur during this period (all registrations are suspended and the one technical registrant has requested voluntary cancellation); and (3) mancozeb, maneb and metiram will be used on only 13 crops (the four technical registrants control over 90 percent of the market and all their products will be labeled for only 13 uses after January 1, 1990).

If all 13 crops are available for two more years, EPA estimates the incremental risk to the general population would be  $7 \times 10^{-7}$ . The risk to infants would be about  $1 \times 10^{-6}$  and the risk to children aged one to six would be approximately  $1 \times 10^{-6}$ . Given that these estimates are upper-bound risk numbers,

EPA believes these interim risks are acceptable.

The interim risks would increase slightly if EPA's final decision is delayed by a cancellation hearing. At the same time, EPA's risk numbers may be overestimates because they are based on field trial data rather than market basket data. Existing monitoring data, while not a sufficient basis for regulatory decisions, suggest that residue data from market basket monitoring may be as much as one to two orders of magnitude less than field trial data for a substantial number of crops. EPA has required registrants to conduct a market basket survey in an effort to show that residue levels on fruits and vegetables sampled from the grocery store are lower than those determined in field trials.

If other registrants attempt to support and maintain any of the 42 food uses which the four technical registrants have dropped from their label, EPA will consider these uses and determine whether any additional risks are acceptable. The Agency plans to closely monitor the marketplace over the next two years and will take whatever action is necessary to maintain acceptable interim risks.

As soon as some or all of the 42 crops are cancelled by all registrants, EPA will finalize tolerance revocations on those uses to remove exposure from imported crops as well as domestic ones. Prior to revocation, the uses of EBDCs on imported food would increase interim risk to a degree.

Additional data from toxicological and exposure studies are expected to be received by EPA. If any of this information raises concerns about interim risk, the Agency is prepared to initiate prompt, further regulatory action.

In identifying crops for retention of registration, the Agency considered the feasibility of modifications to reduce dietary risk, such as lengthening pre-harvest intervals, limiting application frequencies, or lowering application rates. However, due to the lack of information, the Agency could not assess the feasibility of these measures. Without data, it is difficult to determine if the pesticide would be efficacious under these varying conditions. The Agency is interested in comments and data which will help the Agency consider this option more carefully in the Final Determination. Commenters need to specify label modifications and provide either data or analysis to show that the EBDC pesticides could be used efficaciously in accordance with such rates and practices. Even though the



comment period ends 90 days after publication of this Notice, the Agency will likely accept residue data through the summer of 1990 when the Market Basket survey is due. Residue data showing residues resulting from differing application rates or frequencies or pre-harvest intervals will be needed to show the risk reduction impact of these measures. To ensure that studies provide adequate, valid data, EPA urges that protocols and study parameters be discussed with the Agency before studies are initiated.

In conducting the risk-benefit analysis for each crop, the Agency considered the estimated risks posed by alternatives, based on currently available data. In preparing the Final Determination, the Agency will consider not only new data received on the EBDCs but also new data received on the significant alternatives and consider the estimated risks and benefits of EBDC use on each crop in light of the estimated risks and benefits posed by alternative pesticides. The Agency specifically requests comment on the benefits for each crop and on which alternatives are likely to be used.

**2. Tolerances.** Within 90 days of the issuance of this document, the Agency intends to propose tolerance revocations for the 45 food uses of maneb, mancozeb and metiram, and all (58) food uses of zineb proposed for cancellation in this Preliminary Determination. The Agency presently intends to finalize the tolerance actions, reflecting consideration of public comments, when all products for particular uses are voluntarily cancelled, or the Agency issues the Final Determination, whichever occurs earlier. In issuing final rules to revoke tolerances, the Agency will set tolerance expiration dates which take into consideration any crops which were treated legally before the effective date of the cancellation. Tolerances for retained uses will be reevaluated once the Agency receives metabolism and residue data required under the EBDC Comprehensive Data Call-Ins and Registration Standards. Any necessary adjustments to raise or lower existing tolerances will be proposed at that time.

**3. Non-industrial uses.** The Agency proposes a label language requirement that commercial agricultural workers (M/L/A) applying EBDC pesticides wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, shoes, socks, and goggles or a face shield. Additionally, during mixing and loading, a chemical-resistant apron must be worn. For agricultural workers, where completely enclosed cabs with positive pressure filtration, or an

enclosed cockpit for aerial application are used, a long-sleeve shirt and long pants may be worn in place of the protective clothing described above. Chemical-resistant gloves must be available in the cab or cockpit and worn upon exiting. During aerial application, human flaggers are prohibited unless in totally enclosed vehicles. With incorporation of the above-mentioned protective clothing requirements, MOSs/MOEs for workers using EBDC products on agricultural sites would all increase above 100 except for maneb use on grapes and ornamentals which are proposed for cancellation because EPA has determined that risks exceed benefits.

The Agency estimates that the cost of the above protective clothing would range from \$0.75 to \$1.5 million if every commercial agricultural user of EBDC pesticides needed to buy the protective equipment. However, the Agency believes the costs of this requirement would actually be much lower because most growers already own such equipment as it is required for use when applying a number of other agricultural chemicals.

The Agency proposes a label language requirement establishing an interim reentry interval of 24 hours for all EBDC products used on agricultural sites. This interim reentry interval will remain in effect until dislodgeable foliar residue data (showing EBDC and ETU exposure to agricultural workers reentering treated fields for the purposes of hand harvesting, pruning, weeding, etc.) required in the EBDC Registration Standards and as required in the March 1989 EBDC Data Call-In Notice are submitted and evaluated. These data are due to be submitted in July 1990. The Agency believes that there would be little if any economic impact from this requirement.

The Agency proposes a label language requirement that homeowners applying EBDC pesticides wear a long-sleeved shirt and long pants and rubber gloves. Gloves must be washed thoroughly with soap and water before removing; clothes must be changed immediately after using the EBDC product and laundered separately from other laundry items before reuse. Homeowners applying EBDCs must shower immediately after use. The Agency did not consider that additional protective clothing requirements for homeowners would be a viable means of reducing risks because the Agency believes that homeowners will not go to the expense of purchasing or wearing protective clothing. Therefore, EPA proposes to cancel the use of maneb on turf by

homeowners where MOSs/MOEs are under 100, and risks outweigh benefits.

In addition, because millions of households have gardens and many more have lawns which could be treated, the Agency is concerned about estimated cancer risks which exceed  $10^{-6}$  for homeowners applying EBDCs. EPA believes such risks exceed the benefits of use. Homeowner sites which have estimated risks exceeding  $10^{-6}$  are: (1) mancozeb on fruit trees and turf and (2) maneb on vegetables, ornamentals, fruit trees and turf. See Table II-19 in the Technical Support Document. Little or no economic impact is expected because home gardeners can switch from maneb to mancozeb for vegetables and ornamentals and can use captan on fruit trees instead of EBDCs. The Agency estimates that less than 1 percent of residential lawns are treated with EBDCs and any impact would be negligible. Therefore, EPA proposes to cancel homeowner use of mancozeb on fruit trees and turf, and homeowner use of maneb on vegetables, ornamentals, fruit trees and turf.

**4. Industrial uses.** The Agency proposes a label language requirement that all industrial workers (M/L/A) applying EBDC pesticides wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, shoes, socks, and goggles or a face shield. Additionally, during mixing and loading, a chemical-resistant apron must be worn. Similar label language already appears on nabam labels and OSHA requires protective clothing when applying hazardous chemicals under 29 CFR 1910.132; therefore, the Agency believes there would be minimal costs resulting from this requirement.

The Agency proposes cancellation of nabam use in paper mills and sugar mills based on thyroid MOSs/MOEs below 100 due to occupational exposure after incorporation of protective clothing requirements listed above and carcinogenic dietary risk from nabam use in sugar mills. EPA has determined that risks outweigh benefits in these cases. If nabam's use were cancelled, the cost to the paper industry would increase by \$700,000. There are three alternatives for nabam's use in sugar mills. The most viable alternative (Busan) possibly would increase production costs between \$400,000 to 500,000 if it replaced nabam.

#### IV. Procedural Matters

As required by FIFRA sections 8(b) and 25(d), and 40 CFR 154.31(b), EPA has transmitted copies of a draft Notice of Intent to Cancel based on this Notice, together with the support documents, to



the Secretary of Agriculture and the Scientific Advisory Panel for comment. EPA will publish any comments received from the Secretary or the Panel, and EPA's responses, in the Notice of Final Determination.

#### V. Public Comment Opportunity

The Agency is providing a 90-day period for the public to comment on this Notice and on the EBDC Special Review Document. Comments must be submitted by (insert date 90 days after date of publication in the *Federal Register*). While the Agency has specifically requested comment on certain matters, the Agency is seeking comment on all aspects of this proposal. All comments and information should be submitted in triplicate to the address given in this Notice under "ADDRESS". The comments and information should bear the identifying notation OPP-30000/53. All comments, information, and

analyses which come to the attention of EPA may serve as a basis for final determination of regulatory action during the Special Review.

#### VI. Public Docket

Pursuant to 40 CFR 154.15, the Agency has established a public docket (OPP-30000/53) for the EBDC Special Review. This public docket will include (1) this Notice; (2) any other notices pertinent to the EBDC Special Review; (3) non-CBI documents and copies of written comments or other materials submitted to the Agency in response to this Notice or any other Notice, and any other documents regarding the EBDC pesticides submitted at any time during the Special Review process by any person outside the government; (4) a transcript of any public meeting held by the Agency for the purpose of gathering information on the EBDCs; (5) memoranda describing each meeting

held during the Special Review process between Agency personnel and any person outside government pertaining to the EBDCs; and (6) a current index of materials in the public docket.

On a monthly basis, the Agency will distribute a compendium of indices for newly received comments and documents that have been placed in the public docket for this Special Review. This compendium will be distributed by mail to those members of the public who have specifically requested such material for this Special Review, pursuant to 40 CFR 154.15(f)(3).

Dated: December 4, 1989.

**Linda J. Fisher,**

*Assistant Administrator for Pesticides and Toxic Substances.*

[FR Doc. 89-29488 Filed 12-19-89; 8:45 am]

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# Federal Register

Wednesday  
December 20, 1989

## Part VI

## Environmental Protection Agency

40 CFR Parts 60, 51 and 52

**Air Pollution Standards, of Performance  
for New Stationary Sources; Rule and  
Proposed Rules**



## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 60

[AD-FRL-3694-1]

### Standards of Performance for New Stationary Sources; State Plans for Designated Facilities

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** On April 20, 1988 (53 FR 12962), EPA proposed to amend the existing requirement in 40 CFR 60.22(a) to allow a draft or final emission guideline document to be published pursuant to Section 111(d) of the Clean Air Act at the same time as standards of performance for similar new sources are proposed or promulgated pursuant to section 111(b). Today's action promulgates this amendment.

**EFFECTIVE DATE:** December 20, 1989.

Under section 307(b)(1) of the Clean Air Act, judicial review of the actions taken by this notice is available *only* by the filing of a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of today's publication of this rule. Under section 307(b)(2) of the Clean Air Act, the requirements that are the subject of today's notice may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

**ADDRESSES:** *Docket.* Docket No. A-87-21, containing materials relevant to this rulemaking, is available for public inspection on copying between 8:30 a.m. and 3:30 p.m., Monday through Friday, at EPA's Air Docket (LE-131), Room M-1500, 1st Floor, Waterside Mall, 401 M Street SW., Washington, DC 20460. A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** Alice H. Chow or Fred Dimmick, Standards Development Branch (MD-13), Emission Standards Division, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone (919) 541-5624.

#### SUPPLEMENTARY INFORMATION:

##### I. The Rulemaking

Currently, standards of performance for control of new sources of a designated air pollutant must be promulgated before the Administrator can publish a draft emission guideline document for control of that designated pollutant from existing facilities. This rulemaking would allow flexibility in publishing the draft emission guideline

either at the same time or after the corresponding standard of performance for a new source is proposed.

##### II. Public Participation

The opportunity to hold a public hearing on May 24, 1988 at 10:00 a.m., was presented in the proposal notices, but no one desired to make an oral presentation. The public comment period was from April 20, 1988 to June 24, 1988. Two letters were received.

##### III. Summary of Public Comments

The two comment letters received by EPA on the proposed amendment supported the proposed amendment. One commenter suggested that EPA should also allow publication of any draft guideline even *before*, as well as at the same time, EPA proposes the standards of performance. This commenter reasoned that since such standards are supposed to consider costs, energy impacts, etc., it would be useful for the regulated public to provide EPA with the available estimates for particular control methods under consideration. The commenter added that cost and cost effectiveness information for existing sources may be very different than with the construction of an entirely new source. Therefore, EPA would need the information prior to setting any standards.

The second commenter said that it was appropriate for the proposal to provide EPA the opportunity to receive comment on the guidance document simultaneously with receiving comment on the NSPS since it would result in EPA getting a better database to make final decisions on both the standards of performance and the guidelines. The commenter urged EPA to make available for public comment the draft guidance document at the same time, or very shortly thereafter.

Both commenters cautioned that draft guidelines, while not an enforceable instrument, have been used by state and local regulatory agencies as if they were regulation. One commenter said that the draft guideline should not be used in any regulatory decisions at any level until after a thorough public review and that it should be clearly stated that the guideline is not enforceable as a regulation. The second commenter urged EPA to finalize the draft guideline at or near the promulgation date for the standards of performance to alleviate potential enforcement actions that may be taken using a draft document.

##### IV. EPA Responses

The amendment on revising the requirements of 40 CFR 60.22(a) provides EPA the flexibility to publish

draft guidelines at the same time or after standards of performance are proposed or promulgated. After considering the comments on the proposed amendments, EPA concluded that the amendments should be promulgated as proposed.

The two commenters indicated that important information could be attained by EPA if the draft guidelines were made available for the regulated public to review prior to promulgation of the standards. The EPA believes that by providing early draft information which characterizes the existing source constitutes better technology transfer of such information to the public. The EPA agrees it would be useful, in most cases, to receive comments on the draft guidelines at the same time as the standards of performance are proposed, thereby alleviating any unnecessary delay of controls of existing source categories.

Both commenters were concerned that the draft guidelines may be used as an enforcement tool if they were not finalized in a timely manner. The EPA will try to finalize the draft guidelines in an expeditious fashion.

##### V. Administrative

The docket is an organized and complete file of all the information considered by EPA in the development of this rulemaking. The docket is a dynamic file, since material is added throughout the rulemaking development. The docketing system is intended to allow members of the public and industries involved to identify readily and locate documents so that they can effectively participate in the rulemaking process. Along with the statement of basis and purpose of the proposed and promulgated test method revisions and EPA responses to significant comments, the contents of the docket, except for interagency review materials, will serve as the record in case of judicial review (section 307(d)(7)(A)).

Under Executive Order 12291, EPA is required to judge whether a regulation is a "major rule" and, therefore, subject to the requirements of a regulatory impact analysis. The EPA has determined that this regulation would result in none of the adverse economic effects set forth in section 1 of the Order as grounds for finding a regulation to be a "major rule." The EPA has, therefore, concluded that this regulation is not a "major rule" under Executive Order 12291.

The Regulatory Flexibility Act (RFA) of 1980 requires the identification of potentially adverse impacts of Federal regulations upon small business entities. The Act specifically requires the completion of a RFA analysis in those



instances where small business impacts are possible. Because this rulemaking imposes no adverse economic impacts, an analysis has not been conducted.

#### List of Subjects in 40 CFR Part 60

Air Pollution control,  
Intergovernmental relations, Reporting  
and recordkeeping requirements,  
Incorporation by reference, Incinerators,  
Kraft pulp mills.

Dated: November 30, 1989.

William K. Reilly,  
Administrator.

#### PART 60—[AMENDED]

It is proposed that 40 CFR part 60 be amended as follows:

1. The authority citation for 40 CFR part 60 continues to read:

Authority: 42 U.S.C. 7401, 7411, 7414, 7418, and 7601.

2. Section 60.22 is amended by revising paragraph (a) to read as follows:

**§ 60.22 Publication of guideline documents, emission guidelines, and final compliance times.**

(a) Concurrently upon or after proposal of standards of performance for the control of a designated pollutant from affected facilities, the Administrator will publish a draft guideline document containing

information pertinent to control of the designated pollutant from designated facilities. Notice of the availability of the draft guideline document will be published in the Federal Register and public comments on its contents will be invited. After consideration of public comments and upon or after promulgation of standards of performance for control of a designated pollutant from affected facilities, a final guideline document will be published and notice of its availability will be published in the Federal Register.

[FR Doc. 89-28724 Filed 12-19-89; 8:45 am]

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# ENVIRONMENTAL PROTECTION AGENCY

## 40 CFR Part 60

### Standards of Performance for New Stationary Sources; Appendix A—Addition of Methods for Measurement of Polychlorinated Dibenzo-p-Dioxins, Polychlorinated Dibenzofurans, and Hydrogen Chloride Emissions From Stationary Sources

[AD-FRL-3894-2]

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule and notice of public hearing.

**SUMMARY:** The purpose of this proposed rule is to add Method 23, "Determination of Polychlorinated Dibenzo-p-Dioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) from Stationary Sources," and Method 26, "Determination of Hydrogen Chloride Emissions from Stationary Sources" to Appendix A of CFR part 60. These methods are being proposed to determine compliance with subparts Ca and Ea of part 60.

A public hearing will be held, if requested, to provide interested persons an opportunity for oral presentation of data, views, or arguments concerning the proposed rule.

**DATES:** Comments. Comments must be received on or before March 5, 1990.

**Public Hearing.** If anyone contacts EPA requesting to speak at a public hearing by January 10, 1990, a public hearing will be held February 7, 1990, beginning at 10 a.m. Persons interested in attending the hearing should call the contact mentioned under **ADDRESSES** to verify that a hearing will be held.

**Request to Speak at Hearing.** Persons wishing to present oral testimony must contact EPA by January 10, 1990.

**ADDRESSES:** Comments. Comments should be submitted (in duplicate if possible) to: Air Docket (LE-131), Attention: Docket Number A-89-11, U.S. Environmental Protection Agency, room M-1500, 1st Floor, Waterside Mall, 401 M Street SW., Washington, DC 20460.

**Public Hearing.** If anyone contacts EPA requesting a public hearing, it will be held at EPA's Emission Measurement Laboratory Building, Research Triangle Park, North Carolina. Persons interested in attending the hearing or wishing to present oral testimony should notify Gary McAlister, Emission Measurement Branch (MD-19), Technical Support Division, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone (919) 541-1062.

**Docket.** Docket No. A-89-11, containing materials relevant to this rulemaking, is available for public inspection and copying between 8 a.m. and 3:30 p.m., Monday through Friday, at EPA's Air Docket, room M-1500, 1st Floor, Waterside Mall, 401 M Street SW., Washington, DC 20460. A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** Gary McAlister or Roger Shigehara, Emission Measurement Branch (MD-19), Technical Support Division, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone number (919) 541-1062.

#### SUPPLEMENTARY INFORMATION:

##### I. The Rulemaking

Under subparts Ca and Ea, the EPA is proposing to regulate emissions from municipal waste combustors (MWCs) which will include setting emission limits for polychlorinated dibenzo-p-dioxins (PCDDs, CDDs, or dioxins), polychlorinated dibenzofurans (PCDFs, CDFs, or furans), and hydrochloric acid (HCl). There are presently no methods published in 40 CFR part 60, appendix A, to measure any of these pollutants. This action would propose one method to measure the PCDDs and PCDFs and another method to measure the HCl.

##### Summary of Reference Methods

Method 23 is used to measure the emission of PCDDs and PCDFs from MWCs. A sample is withdrawn isokinetically from the stack through a probe, a filter, and a trap packed with a solid adsorbent. The PCDDs and PCDFs are collected in the probe, on the filter, and on the solid adsorbent. The PCDDs and PCDFs are extracted from the particulate matter and the adsorbent with a hot organic solvent. The extracted PCDDs and PCDFs are separated by capillary gas chromatography and then each isomer is identified and measured with mass spectrometry (GC/MS). The total PCDDs and PCDFs are the sum of the individual isomers. Toxicity factors are not used in the calculation.

Method 26 is used to measure the emission of HCl from MWCs. A sample is withdrawn at a constant rate from the stack through a probe and impingers filled with a dilute acid. The HCl is collected in the impinger solution. The chloride ion is separated by ion chromatography and measured by a conductivity detector.

##### Background

In 1983, the American Society of Mechanical Engineers (ASME) recognized that the testing for PCDDs

and PCDFs needed to be standardized. In February of 1984, the ASME convened a committee of government representatives, testing consultants, equipment manufacturers, and incinerator operators to write a standard procedure for PCDDs and PCDFs. This eventually distributed as a draft ASME protocol in December of 1984. The procedure that we are proposing was derived from this draft ASME protocol. We are proposing significant changes in the quality assurance requirements and the solvents used to recover the sample. Because more labeled compounds are available, the proposed method will require additional labeled internal standards and surrogate compounds which will provide better representation of the entire range of PCDDs and PCDFs. Under the proposal the filter and solid adsorbent would be extracted in the laboratory with toluene to assure a high PCDD and PCDF recovery efficiency. Additionally the proposed sample recovery solvents used for rinsing the sample train glassware in the field would be acetone followed by methylene chloride with a final quality assurance rinse using toluene. EPA will continue to review the toluene field rinse quality assurance results and continue to evaluate the desirability of replacing methylene chloride with toluene for field rinsing sample glassware.

##### II. Administrative Requirements

###### A. Public Hearing

A public hearing will be held, if requested, to discuss the proposed test methods in accordance with section 307(d)(5) of the Clean Air Act. Persons wishing to make oral presentations should contact EPA at the address given in the **ADDRESSES** section of this preamble. Oral presentations will be limited to 15 minutes each. Any member of the public may file a written statement with EPA before, during, or within 30 days after the hearing. Written statements should be addressed to the Air Docket address given in the **ADDRESSES** section of this preamble.

A verbatim transcript of the hearing and written statements will be available for public inspection and copying during normal working hours at EPA's Air Docket in Washington, DC (see **ADDRESSES** section of this preamble).

###### B. Docket

The docket is an organized and complete file of all the information submitted to or otherwise considered by EPA in the development of this proposed



rulemaking. The principal purposes of the docket are: (1) To allow interested parties to identify and locate documents so that they can effectively participate in the rulemaking process and (2) to serve as the record in case of judicial review (except for interagency review materials) [section 307(d)(7)(A)].

#### C. Office of Management and Budget Review

Executive Order 12291 Review. Under Executive Order 12291, EPA must judge whether a regulation is "major" and, therefore, subject to the requirement of a regulatory impact analysis. The proposal of these test methods is not major because it will not have an annual effect on the economy of \$100 million or more; it will not result in a major increase in costs or prices; and there will be no significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic or export markets. Any burden resulting from the use of these methods is considered in the burden estimate for the regulation requiring the use of these methods.

#### D. Regulatory Flexibility Act Compliance

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this attached rule, if promulgated, will not have an economic impact on small entities because no additional costs will be incurred from this action.

This proposal does not contain any information collection requirements subject to OMB review under the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.*

#### List of Subjects in 40 CFR Part 60

Air pollution control, Municipal waste combustors, MWCs, Polychlorinated dibenzo-p-dioxins, Polychlorinated dibenzofurans, Hydrogen chloride.

Dated: November 30, 1989.

William K. Reilly,  
Administrator.

The EPA proposes to amend title 40, part 60 of the Code of Federal Regulations as follows:

1. The authority citation for part 60 continues to read as follows:

Authority: 42 U.S.C. 7401, 7411, 7414, 7416, 7601.

2. Appendix A is amended by adding Methods 23 and 26 to read as follows:

#### Appendix A—Reference Methods

• • • • •

#### Method 23—Determination of Polychlorinated Dibenzo-p-Dioxins Polychlorinated Dibenzofurans From Stationary Sources

##### 1. Applicability and Principle

1.1 Applicability. This method is applicable to the determination of polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) from stationary sources.

1.2 Principle. A sample is withdrawn from the gas stream isokinetically and collected in the sample probe, on a glass fiber filter, and on a packed column of adsorbent material. The PCDDs and PCDFs are extracted from the sample, separated by high resolution gas chromatography, and measured by high resolution mass spectrometry.

##### 2. Apparatus

2.1 Sampling. A schematic of the sampling train used in this method is shown in Figure 23-1. The train is identical to that described in Section 2.1 of Method 5 of this appendix with the following additions:

2.1.1 Nozzle. The nozzle shall be made of nickel, nickel plated stainless steel, quartz, or borosilicate glass.

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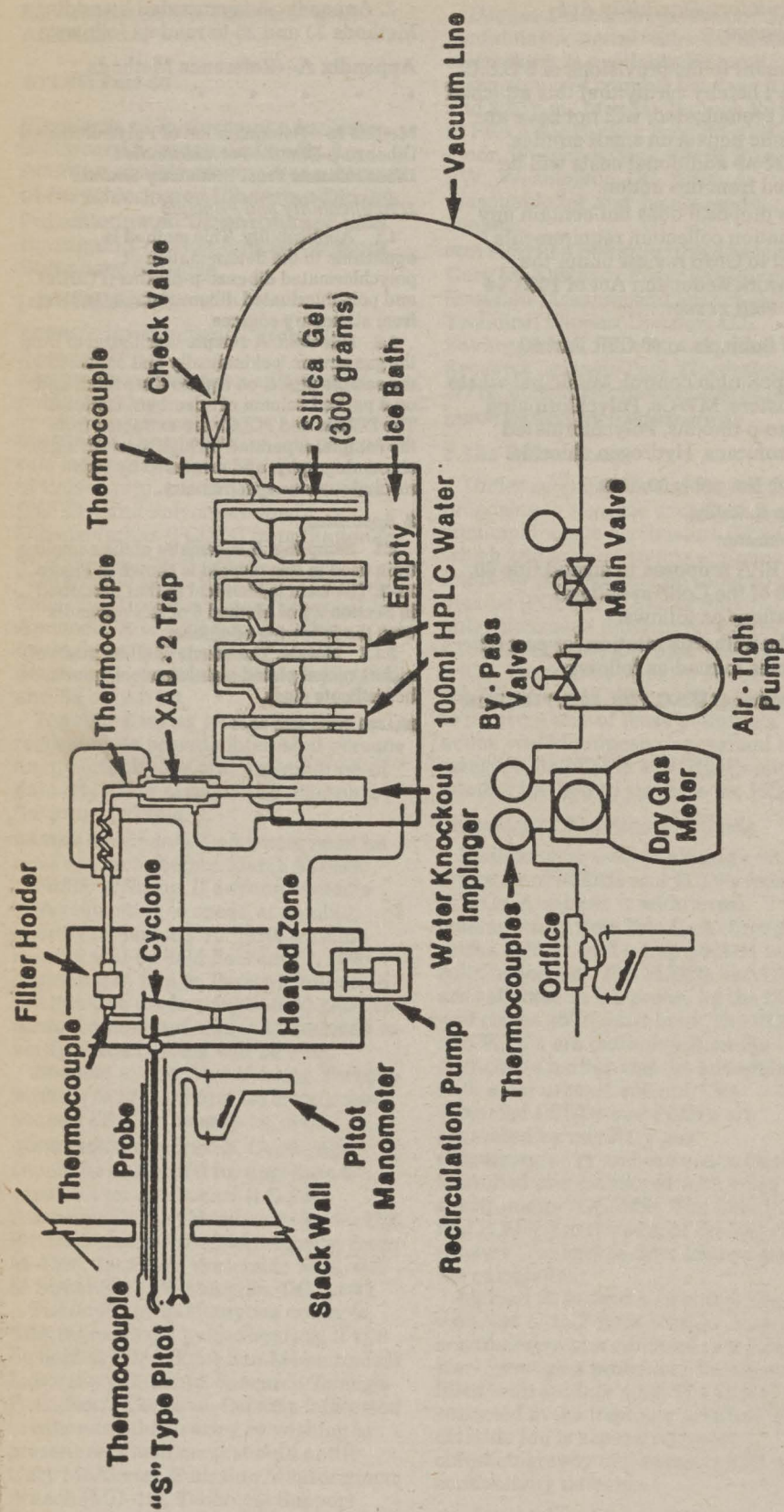


Figure 1. CDD/CDF Sampling Train Configuration



2.1.2 Sample Transfer Lines. The sample transfer lines, if needed, shall be heat traced, heavy walled TFE (½ in. OD with ¼ in wall) with connecting fittings that are capable of forming leak-free, vacuum-tight connections without using sealing greases. The line shall be as short as possible and must be maintained at 120 °C.

2.1.1 Filter Support. Teflon or Teflon coated wire.

2.1.2 Adsorbent Module. Glass container to hold the solid adsorbent. A schematic diagram is shown in Figure 23-2. Other physical configurations of the resin trap/condenser assembly are acceptable. The

connecting fittings shall form leak-free, vacuum tight seals. No sealant greases shall be used in the sampling train. A coarse glass frit is included to retain the adsorbent.

2.1.3 Condenser. Glass, coil type with compatible fittings. A schematic diagram is shown in Figure 23-2.

2.1.4 Water Bath. Thermostatically controlled to maintain the gas temperature exiting the condenser at <20 °C (68 °F).

2.2 Sample Recovery.

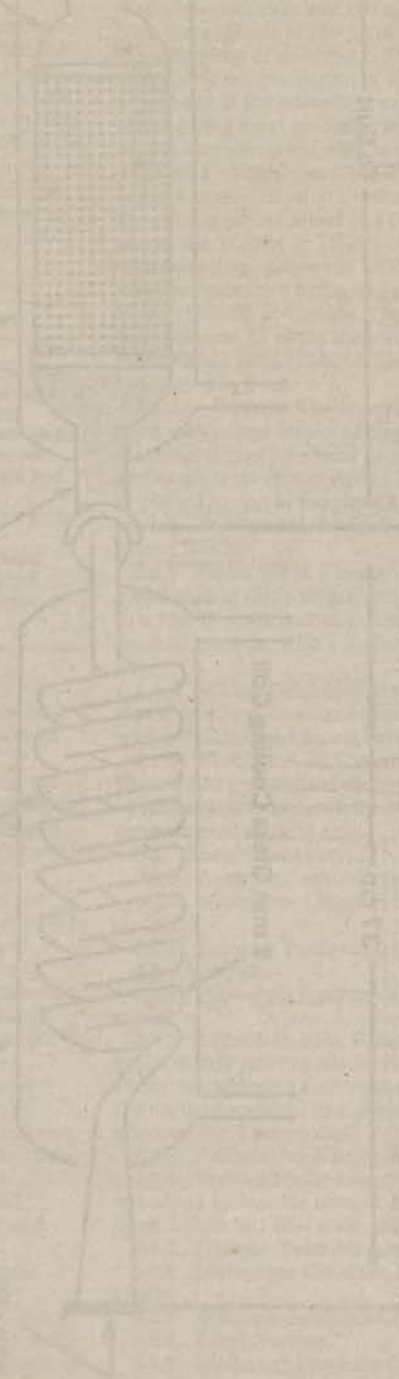
2.2.1 Fitting Caps. Ground glass, Teflon or aluminum foil to cap off the sample exposed sections of the train.

2.2.2 Wash Bottle. Teflon, 500-ml.

2.2.3 Probe Liner and Probe-Nozzle Brushes. Inert bristle brushes with precleaned stainless steel or Teflon handles. The probe brush shall have extensions of stainless steel or Teflon, at least as long as the probe. The brushes shall be properly sized and shaped to brush out the probe liner and nozzle.

2.2.4 Filter Storage Container. Sealed filter holder, wide-mouth amber glass jar with Teflon-lined cap, or aluminum foil.

BILLING CODE 6560-50-M





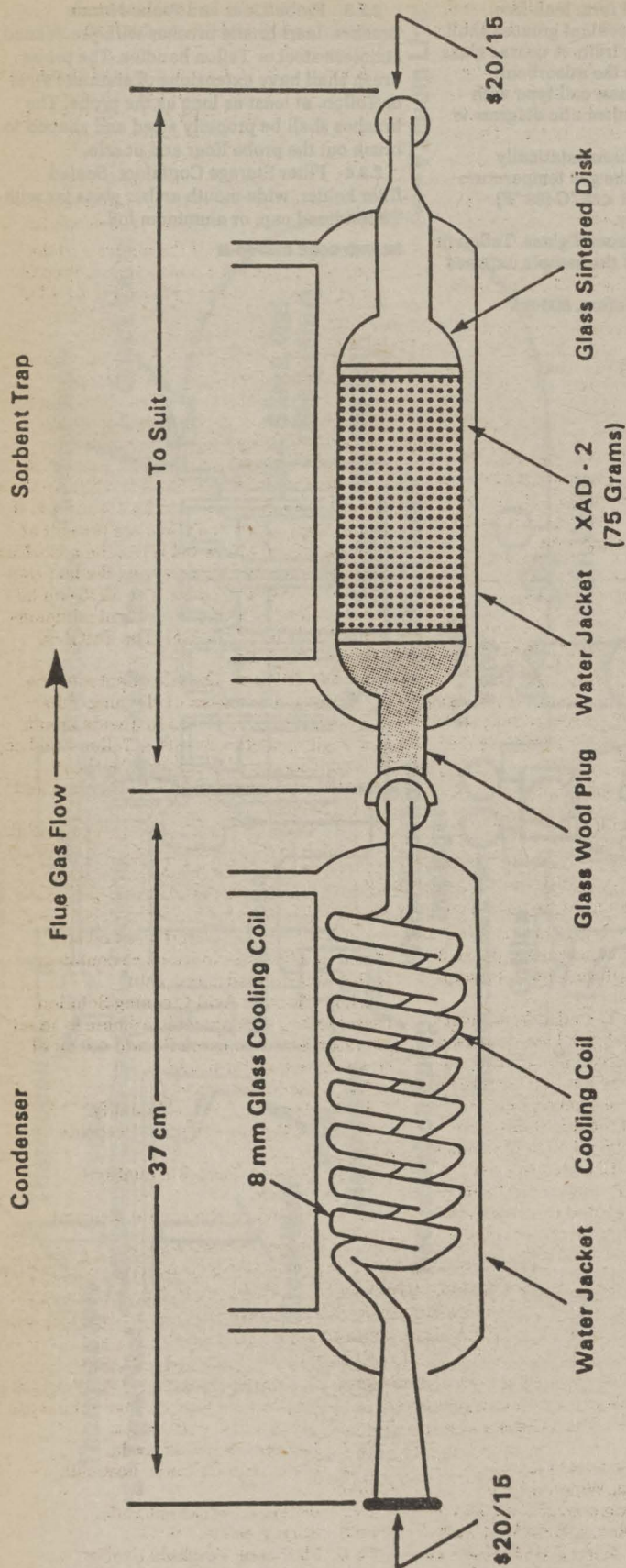


FIGURE 2. CONDENSER AND SORBENT TRAP FOR COLLECTION OF GASEOUS PCDDs AND PCDFs

BILLING CODE 6560-50-C



2.2.5 Balance. Triple beam.  
2.2.6 Aluminum Foil. Heavy duty, hexane-rinsed.

2.2.7 Metal Storage Container. Air tight container to store silica gel.

2.2.8 Graduated Cylinder. Glass, 250-ml with 2-ml graduation.

2.2.9 Glass Sample Storage Container. Amber glass bottle for sample glassware washes, 500- or 1000-ml, with leak free Teflon-lined caps.

### 2.3 Analysis.

2.3.1 Sample Container. 125- and 250-ml flint glass bottles with Teflon-lined caps.

2.3.2 Test Tube. Glass.

2.3.3 Soxhlet Extraction Apparatus. Capable of holding 43×123 mm extraction thimbles.

2.3.4 Pasteur Pipettes. For preparing liquid chromatographic columns.

2.3.5 Reacti-vials. Amber glass, 2-ml, silanized prior to use.

2.3.6 Rotary Evaporator. Buchi/Brinkman RF-121 or equivalent.

2.3.7 Nitrogen Evaporative Concentrator. N-Evap Analytical Evaporator Model III or equivalent.

2.3.8 Separatory Funnels. Glass, 2-liter.

2.3.9 Gas Chromatograph. Consisting of the following components:

2.3.9.1 Oven. Capable of maintaining the separation column at the proper operating temperature  $\pm 1^\circ\text{C}$  and performing programmed increases in temperature at rates of at least  $3^\circ\text{C}/\text{min}$ .

2.3.9.2 Temperature Gauge. To monitor column oven, detector, and exhaust temperatures  $\pm 1^\circ\text{C}$ .

2.3.9.3 Flow System. Gas metering system to measure sample, fuel, combustion gas, and carrier gas flows.

2.3.9.4 Capillary Columns. A fused silica column, 60 m×25 mm inside diameter (ID), coated with DB-5 and a fused silica column, 30 m×25 mm ID coated with SP-2331.

2.3.10 Mass Spectrometer. Capable of routine operation at a resolution of 1:10000 with a stability of  $\pm 5$  ppm.

2.3.11 Data System. Compatible with the mass spectrometer and capable of monitoring at least five groups of 25 ions.

2.3.12 Analytical Balance. To measure within 0.1 mg.

### 3. Reagents

#### 3.1 Sampling.

3.1.1 Filters. Glass fiber filters, without organic binder, exhibiting at least 99.95 percent efficiency ( $<0.05$  percent penetration) on 0.3-micron dioctyl phthalate smoke particles. The filter efficiency test shall be conducted in accordance with ASTM Standard Method D2986-71 (Reapproved 1978) (incorporated by reference—see § 60.17).

3.1.1.1 Precleaning. All filters shall be cleaned before their initial use. Place a glass extraction thimble and 1 g of silica gel and a plug of glass wool into a Soxhlet apparatus, charge the apparatus with toluene, and reflux for a minimum of three hours. Remove the toluene and discard it, but retain the silica gel. Place no more than 50 filters in the thimble onto the bed of silica gel and top with the cleaned glass wool. Charge the Soxhlet with toluene and reflux for 16 hours.

After extraction, allow the Soxhlet to cool, remove the toluene extract, and retain it for analysis. Remove the filters and dry them under a clean  $\text{N}_2$  stream. Store the filters tightly wrapped in cleaned aluminum foil.

3.1.1.2 Quality Control Check. Analyze the toluene extract from Section 3.1.1.1 as described in Sections 5.2 and 5.3. If any TCDD or TCDF is present at a concentration above the minimum detectable level, repeat the cleaning procedure and reanalyze the extract until no TCDD or TCDF is detectable.

3.1.2 Adsorbent Resin. Amberlite XAD-2 resin. Thoroughly cleaned before initial use.

3.1.2.1 Cleaning Procedure. This procedure may be carried out in a giant Soxhlet extractor. An all-glass filter thimble containing an extra-coarse frit is used for extraction of XAD-2. The frit is recessed 10–15 mm above a crenellated ring at the bottom of the thimble to facilitate drainage. The resin must be carefully retained in the extractor cup with a glass wool plug and a stainless steel ring because it floats on methylene chloride. This process involves sequential extraction in the following order.

Solvent	Procedure
Water	Initial rinse: Place resin in a beaker, rinse once with water, and discard. Fill with water a second time, let stand overnight, and discard.
Water	Extract with water for 8 hours.
Methanol	Extract for 22 hours.
Methylene chloride	Extract for 22 hours.
Methylene chloride (fresh).	Extract for 22 hours.

#### 3.1.2.2 Drying.

3.1.2.2.1 Drying Column. Pyrex pipe, 10.2 cm ID by 0.6 m long, with suitable retainers as shown in Figure 23-3.

3.1.2.2.2 Procedure. The adsorbent must be dried with clean inert gas. Liquid nitrogen from a standard commercial liquid nitrogen cylinder has proven to be a reliable source of large volumes of gas free from organic contaminants. Connect the liquid nitrogen cylinder to the column by a length of cleaned copper tubing, 0.95 cm ID, coiled to pass through a heat source. A convenient heat source is a water bath heated from a steam line. The final nitrogen temperature should only be warm to the touch and not over  $40^\circ\text{C}$ . Continue flowing nitrogen through the adsorbent until all the residual solvent is removed. The rate of flow should be high enough to gently agitate the particles but not high enough to cause the particles to fracture.

3.1.2.3 Quality Control Check. The adsorbent must be checked for residual methylene chloride as well as TCDDs and TCDFs.

#### 3.1.2.3.1 Methylene Chloride Residue.

3.1.2.3.1.1 Extraction. Weigh a 1.0 g sample of dried resin into a small vial, add 3 ml of toluene, cap the vial, and shake it well.

3.1.2.3.1.2 Analysis. Inject a  $5\mu\text{l}$  sample of the extract into a gas chromatograph operated under the following conditions:

Column: 6 ft x  $\frac{1}{8}$  in stainless steel containing 10% OV-101 on 100/120 Supelcoport.

Carrier Gas: Helium at a rate of 30 ml/min.

Detector: Flame ionization detector

operated at a sensitivity of  $4 \times 10^{-11}$  A/mV.

Injection Port Temperature:  $250^\circ\text{C}$ .

Detector Temperature:  $305^\circ\text{C}$ .

Oven Temperature:  $30^\circ\text{C}$  for 4 min; programmed to rise at  $40^\circ\text{C}$  until it reaches  $250^\circ\text{C}$ ; return to  $30^\circ\text{C}$  after 1000 seconds.

Compare the results of the analysis to the results from the reference solution. Prepare the reference solution by injecting 2.5  $\mu\text{l}$  of methylene chloride into 100 ml of toluene. This corresponds to 100  $\mu\text{g}$  of methylene chloride per g of adsorbent. The maximum acceptable concentration is 1000  $\mu\text{g}/\text{g}$  of adsorbent. If the adsorbent exceeds this level, drying must be continued until the excess methylene chloride is removed.

3.1.2.3.2 TCDDs and TCDFs. Extract the sample as described in Section 5.1.1. Analyze the extract as described in §§ 5.2 and 5.3. If any of the TCDDs or TCDFs are present at concentrations above the MDL, the adsorbent must be recleaned by repeating the last step of the cleaning procedure. The MDL can be calculated as  $\frac{1}{3}$  of the theoretical minimum quantifiable level (TMQL). The TMQL is calculated in § 9.8.

3.1.2.4 Storage. The adsorbent must be used within four weeks of cleaning. After cleaning, it may be stored in a wide mouth amber glass container with a Teflon-lined cap or placed in one of the glass adsorbent modules tightly sealed with Teflon film and elastic bands.

3.1.3 Glass Wool. Cleaned by sequential immersion in three aliquots of hexane, dried in a  $110^\circ\text{C}$  oven, and stored in a hexane-washed glass jar with a Teflon-lined screw cap.

3.1.4 Water. Deionized distilled and stored in a hexane-rinsed glass container with a Teflon-lined screw cap.

3.1.5 Chromic Acid Cleaning Solution. Dissolve 20 g of sodium dichromate in 15 ml of water, and then carefully add 400 ml of concentrated sulfuric acid.

#### 3.2 Sample Recovery.

3.2.2 Acetone. Pesticide quality.

3.2.2 Methylene Chloride. Pesticide quality.

3.2.3 Toluene. Pesticide quality.

#### 3.3 Analysis.

3.3.1 Potassium Hydroxide. Reagent grade.

3.3.2 Sodium Sulfate. Granulated, reagent grade. Purify prior to use by rinsing with methylene chloride and oven drying. Store the cleaned material in a glass container with a Teflon-lined screw cap.

3.3.3 Sulfuric Acid. Reagent grade.

3.3.4 Sodium Hydroxide. 1.0 N. Weigh 40 g of sodium hydroxide into a 1-liter volumetric flask. Dilute to 1 liter with water.

3.3.5 Hexane. Pesticide grade.

3.3.6 Methylene Chloride. Pesticide Grade.

3.3.7 Benzene. Pesticide Grade.

3.3.8 Ethyl Acetate.

3.3.9 Methanol. Pesticide Grade.

3.3.10 Toluene. Pesticide Grade.

3.3.11 Isooctane. Pesticide Grade.



## 3.3.12 Cyclohexane. Pesticide Grade.

3.3.13 Basic Alumina. Activity grade 1, 100-200 mesh. Prior to use, activate the alumina by heating for 16 hours at 130 °C before use. Store in a desiccator.

3.3.14 Silica Gel. Bio-Sil A, 100-200 mesh. Prior to use, activate the silica gel by heating for at least 30 minutes at 180 °C. After cooling rinse the silica gel sequentially with methanol and methylene chloride. Heat the rinsed silica gel at 50 °C for 10 minutes, then increase the temperature gradually to 180 °C over 25 minutes and maintain it at this temperature for 90 minutes. Cool at room temperature and store in a glass container with a Teflon-lined screw cap.

3.3.15 Silica Gel Impregnated with Sulfuric Acid. Combine 100 g of silica gel with 44 g of concentrated sulfuric acid in a screw capped glass bottle and agitate thoroughly. Disperse the solids with a stirring rod until a uniform mixture is obtained. Store the mixture in a glass container with a Teflon-lined screw cap.

3.3.16 Silica Gel Impregnated with Sodium Hydroxide. Combine 39 g of 1 N sodium hydroxide with 100 g of silica gel in a screw capped glass bottle and agitate thoroughly. Disperse solids with a stirring rod until a uniform mixture is obtained. Store the mixture in glass container with a Teflon-lined screw cap.

3.3.17 Carbon/Celite. Combine 10.7 g of AX-21 carbon with 124 g of Celite 545 in a 250-ml glass bottle with a Teflon-lined screw cap. Agitate the mixture thoroughly until a uniform mixture is obtained. Store in the glass container.

3.3.18 Nitrogen. Ultra high purity.

3.3.19 Hydrogen. Ultra high purity.

3.3.20 Internal Standard Solution. Prepare a stock standard solution containing the isotopically labelled PCDDs and PCDFs at the concentrations shown in Table 1 under the heading "Internal Standards" in 10 ml of isooctane.

3.3.21 Surrogate Standard Solution. Prepare a stock standard solution containing the isotopically labelled PCDDs and PCDFs at the concentrations shown in Table 1 under the heading "Surrogate Standards" in 10 ml of isooctane.

3.3.22 Recovery Standard Solution. Prepare a stock standard solution containing the isotopically labelled PCDDs and PCDFs at the concentrations shown in Table 1 under the heading "Recovery Standards" in 10 ml of isooctane.

## 4. Procedure

4.1 Sampling. The complexity of this method is such that, in order to obtain reliable results, testers should be trained and experienced with the test procedures.

## 4.1.1 Pretest Preparation.

4.1.1.1 Cleaning Glassware. All glass components of the train upstream of and including the adsorbent module shall be cleaned as described in section 3A of the Manual of Analytical Methods for the Analysis of Pesticides in Human and Environmental Samples. Special care shall be devoted to the removal of residual silicone grease sealants on ground glass connections of used glassware. Any residue shall be removed by soaking the glassware for several

hours in a chromic acid cleaning solution prior to cleaning as described above.

4.1.1.2 Adsorbent Trap. The traps must be loaded in a clean area to avoid contamination. They should not be loaded in the field. Fill a trap with 20 to 30 g of XAD-2. Follow the XAD-2 with glass wool and tightly cap both ends of the trap.

4.1.1.3 Sample Train. It is suggested that all components be maintained according to the procedure described in APTD-0576.

4.1.1.4 Silica Gel. Weigh several 200 to 300 g portions of silica gel in an air tight container to the nearest 0.5 g. Record the total weight of the silica gel plus container, on each container. As an alternative, the silica gel may be weighed directly in its impinger or sampling holder just prior to sampling.

4.1.1.5 Filter. Check each filter against light for irregularities and flaws or pinhole leaks. Pack the filters flat in a clean glass container or wrapped in aluminum foil.

4.1.2 Preliminary Determinations. Same as section 4.1.2 of Method 5.

## 4.1.3 Preparation of Collection Train.

4.1.3.1 During preparation and assembly of the sampling train, keep all train openings where contamination can enter sealed until just prior to assembly or until sampling is about to begin.

Note: Do not use sealant grease in assembling the train.

4.1.3.2 Place approximately 100 ml of water in each of the first two impingers, leave the third impinger empty, and transfer approximately 200 to 300 g of preweighed silica gel from its container to the fourth impinger.

4.1.3.3 Place the container in a clean place for later use in the sample recovery. Alternatively, the weight of the silica gel plus impinger may be determined to the nearest 0.5 g and recorded.

4.1.3.4 Assemble the train as shown in Figure 23-1.

4.1.3.5 Turn on the adsorbent module and condenser coil recirculating pump and begin monitoring the adsorbent module gas entry temperature. Ensure proper sorbent temperature gas entry temperature before proceeding and before sampling is initiated. It is extremely important that the XAD-2 adsorbent resin temperature never exceed 50 °C because thermal decomposition will occur. During testing, the XAD-2 temperature must not exceed 20 °C for efficient capture of the TCDDs and TCDFs.

4.1.4 Leak-Check Procedure. Same as Method 5, § 4.1.4.

4.1.5 Sample Train Operation. Same as Method 5, § 4.1.5.

4.2 Sample Recovery. Proper cleanup procedure begins as soon as the probe is removed from the stack at the end of the sampling period. Seal the nozzle end of the sampling probe with Teflon tape or aluminum foil.

When the probe can be safely handled, wipe off all external particulate matter near the tip of the probe. Remove the probe from the train and close off both ends with aluminum foil. Seal off the inlet to the train with Teflon tape, a ground glass cap, or aluminum foil.

Transfer the probe and impinger assembly to the cleanup area. This area shall be clean and enclosed so that the chances of losing or contaminating the sample are minimized. Smoking which could contaminate the sample shall not be allowed in the cleanup area.

Inspect the train prior to and during disassembly and note any abnormal conditions, e.g., broken filters, colored impinger liquid, etc. Treat the samples as follows:

4.2.1 Container No. 1. Either seal the filter holder or carefully remove the filter from the filter holder and place it in its identified container. Use a pair of cleaned tweezers to handle the filter. If it is necessary to fold the filter, do so such that the particulate cake is inside the fold. Carefully transfer to the container any particulate matter and/or filter fibers which adhere to the filter holder gasket, by using a dry inert bristle brush and/or a sharp-edged blade. Seal the container.

4.2.2 Absorbent Module. Remove the module from the train, tightly cap both ends, label it, cover with aluminum foil, and store it on ice for transport to the laboratory.

4.2.3 Cyclone Catch. If the optional cyclone is used, quantitatively recover the particulate into a glass container and cap.

4.2.4 Container No. 2. Quantitatively recover material deposited in the nozzle, probe transfer lines, the front half of the filter holder, and the cyclone, if used, first by brushing while rinsing three times each with acetone and then by rinsing the probe three times with methylene chloride. Collect all the rinses in Container No. 2.

Rinse the back half of the filter holder, the connecting line between the filter and the condenser, and the condenser, if using a separate condenser and adsorbent trap, sequentially, three times each, with acetone and methylene chloride. Collect all the rinses in Container No. 2 and mark the level of the liquid on the container.

4.2.5 Container No. 3. Repeat the rinsing described in section 4.2.4 using toluene as the rinse solvent. Collect the rinses in Container No. 3 and mark the level of the liquid on the container.

4.2.6 Impinger Water. Measure the liquid in the first three impingers to within  $\pm 1$  ml by using a graduated cylinder or by weighing it to within  $\pm 0.5$  by using a balance. Record the volume or weight of liquid present. This information is required to calculate the moisture content of the effluent gas.

Discard the liquid after measuring and recording the volume or weight. 4.2.7 Silica Gel. Note the color of the indicating silica gel to determine if it has been completely spent and make a mention of its condition. Transfer the silica gel from the fourth impinger to its original container and seal. A funnel may make it easier to pour the silica gel without spilling. A rubber policeman may be used as an aid in removing the silica gel from the impinger.

## 5. Analysis

## 5.1 Sample Extraction.

5.1.1 Container No. 1. Place a glass extraction thimble and 1 g of silica gel and a plug of glass wool into the Soxhlet apparatus.



charge the apparatus with toluene, and reflux for a minimum of 3 hours. Remove the toluene and discard it, but retain the silica gel. Suspend the adsorbent module directly over the extraction thimble described in section 5.1.1. The glass frit of the module should be in the up position. The thimble is contained in a clean beaker, which will serve to catch the solvent rinses. Using a Teflon squeeze bottle, flush the XAD-2 into the thimble onto the bed of cleaned silica gel. Thoroughly rinse the glass module with toluene into the beaker containing the thimble. Add the XAD-2 glass wool plug to the thimble, add the contents of container No. 1, and add the concentrate from Section 5.1.2. For low level samples, add 20  $\mu$ l of the internal standard solution (section 3.3.20), for high level samples, add 100  $\mu$ l of the solution. Low level samples are those samples that contain less than 200 pg of any TCDD of TCDF. Cover the XAD-2 in the thimble with the cleaned glass wool plug to prevent the resin from floating into the solvent reservoir of the extractor. If the resin is wet, effective extraction can be accomplished by loosely packing the resin in the thimble. The thimble is placed in the extractor, and the toluene contained in the beaker is added to the solvent reservoir. Additional toluene is added to make the reservoir approximately two-thirds full. Add Teflon boiling chips and assemble the apparatus. Adjust the heat source to cause the extractor to cycle 5-6 times per hour. Extract the resin for 16 hours. After extraction, allow the Soxhlet to cool. Transfer the toluene extract and three 10-ml rinses to the rotary evaporator. Concentrate the extract to approximately 8 ml. Use nitrogen evaporation to further reduce the sample to about 1 ml. Split the sample in half. Store one half and analyze the other according to the procedures in sections 5.2 and 5.3.

5.1.2 Container No. 1. Transfer the contents directly to the glass thimble of the extractor and extract them simultaneously with the XAD-2 resin.

5.1.3 Container No. 2. Concentrate the sample to a volume of about 1-5 ml using the rotary evaporator apparatus, at a temperature of less than 37 °C. Rinse the sample container three times with small portions of methylene chloride and add these to the concentrated solution and concentrate further to near dryness. This residue contains particulate matter removed in the rinse of the train probe and nozzle. Add the concentrate to the filter and the XAD-2 resin in the Soxhlet apparatus as described in section 5.1.1.

5.1.4 Container No. 3. Concentrate the sample to a volume of about 1-5 ml using the rotary evaporator apparatus, at a temperature of less than 37 °C. Rinse the sample container three times with small portions of toluene and add these to the concentrated solution and concentrate further to near dryness. Analyze the extract according to the procedures in sections 5.2 and 5.3.

5.2 Sample Cleanup and Fractionation.

5.2.1 Silica Gel Column. Pack one end of a glass column, 20 mm x 230 mm, with glass wool. Add in sequence, 1 g silica gel, 2 g of sodium hydroxide impregnated silica gel, 1 g

silica gel, 4 g of acid-modified silica gel, and 1 g of silica gel. Wash the column with 30 ml of hexane and discard it. Add the sample extract, dissolved in 5 ml of hexane to the column with two additional 5-ml rinses. Elute the column with an additional 90 ml of hexane and retain the entire eluate. Concentrate this solution to a volume of about 1 ml using the nitrogen evaporative concentrator (section 2.3.7).

5.2.2 Basic Alumina Column. Shorten a 25-ml disposable Pasteur pipette to about 18 ml. Pack the lower section with glass wool and 12 g of basic alumina. Transfer the concentrated extract from the silica gel column to the top of the basic alumina column and elute the column sequentially with 120 ml of 0.5 percent methylene chloride in hexane followed by 120 ml of 35 percent methylene chloride in hexane. Discard the first 120 ml of eluate. Collect the second 120 ml of eluate and concentrate it to about 0.5 ml using the nitrogen evaporative concentrator.

5.2.3 AX-21 Carbon/Celite 545 Column. Remove the bottom 0.5 inch from the tip of a 9-ml disposable Pasteur pipette. Insert a filter paper disk in the top of the pipette 2.5 cm from the constriction. Add sufficient carbon/celite mixture to form a 2 cm column. Top with a glass wool plug. Rinse the column in sequence with 2 ml of 50 percent benzene in ethyl acetate, 1 ml of 50 percent methylene chloride in cyclohexane and 2 ml of hexane. Discard these eluates. Transfer the concentrate in 1 ml of hexane from the basic alumina column to the carbon/celite column along with 1 ml of hexane rinse. Elute the column sequentially with 2 ml of 50 percent methylene chloride in hexane and 2 ml of 50 percent benzene in ethyl acetate and discard these eluates. Invert the column and elute in the reverse direction with 4 ml of toluene. Collect this eluate. Concentrate the eluate in a rotary evaporator at 50 °C to about 1 ml. Transfer the concentrate to a Reacti-vial using a toluene rinse and concentrate to a volume of 200  $\mu$ l using a stream of N<sub>2</sub>. Store extracts in a freezer, shielded from light, prior to analysis.

5.3 Analysis. Analyze the sample using a gas chromatograph coupled to a mass spectrometer (GC/MS) using the instrumental parameters in sections 5.3.1 and 5.3.2. A 1 to 5  $\mu$ l aliquot of the extract is injected into the GC. Sample extracts are first analyzed using the DB-5 capillary column to determine the concentration of each isomer of PCDDs and PCDFs (tetra-through octa-). If tetra-chlorinated dibenzofurans are detected in this analysis, then another aliquot of the sample is analyzed in a separate run, using the SP 2331 column to measure the 2,3,7,8 tetra-chlorodibenzofuran isomer.

5.3.1 Gas Chromatograph Operating Conditions.

5.3.1.1 Injector. Configured for capillary column, splitless, 250 °C.

5.3.1.2 Carrier Gas. Helium, 1-2 ml/min.

5.3.1.3 Oven. Initially at 150 °C. Raise ballistically to 190 °C and then at 3 °C/min up to 300 °C.

5.3.2 High Resolution Mass Spectrometer.

5.3.2.1 Resolution. 8000-10000 m/e.

5.3.2.2 Ionization Mode. Electron impact, 70 eV.

5.3.2.3 Source Temperature 250 °C.

5.3.2.4 Monitoring Mode. Selected ion monitoring. A list of the various ions to be monitored is summarized in Table 4.

5.3.2.5 Identification Criteria. The following identification criteria shall be used for the characterization of polychlorinated dibenzodioxins and dibenzofurans.

1. The integrated ion-abundance ratio ( $M+M+2$  or  $M+2/M+4$ ) shall be within 15 percent of the theoretical value. The acceptable ion-abundance ratio ranges for the identification of chlorine-containing compounds are given in Table 5.

2. The retention time for the analytes must be within 3 seconds of the corresponding <sup>13</sup>C-labeled internal standard, surrogate or alternate standard.

3. The monitored ions shown in Table 4 for a given analyte shall reach their maximum within 2 seconds of each other.

4. The identification of specific isomers that do not have corresponding <sup>13</sup>C-labeled standards is done by comparison of the relative retention time (RRT) of the analyte to the nearest internal standard retention time with reference (i.e., within 0.005 RRT units) to the comparable RRTs found in the continuing calibration.

5. The signal to noise for all monitored ions must be greater than 2.5.

6. The confirmation of 2,3,7,8-TCDD and 2,3,7,8-TCDF shall satisfy all of the above identification criteria.

7. For the identification of PCDFs, no signal may be found in the corresponding PCDF channels.

5.3.2.6 Quantification. The peak areas for the two ions monitored for each analyte are summed to yield the total response for each analyte. Each internal standard is used to quantify the indigenous PCDDs or PCDFs in its homologous series. For example the <sup>13</sup>C<sub>12</sub>-1,2,3,4-tetra chlorinated dibenzodioxin is used to calculate the concentrations of all other tetra chlorinated isomers. Recoveries of the tetra- and penta- internal standards are calculated using the <sup>13</sup>C<sub>12</sub>-1,2,3,4-TCDD. Recoveries of the hexa- through octa- internal standards are calculated using <sup>13</sup>C<sub>12</sub>-1,2,3,7,8,9-HxCDD. Recoveries of the surrogate standards are calculated using the corresponding homolog from the internal standard.

## 6. Calibration

Same as Method 5 with the following additions.

6.1 GC/MS System.

6.1.1 Initial Calibration. Calibrate the GC/MS system using the set of five standards shown in Table 2 for low level samples or Table 3 for high level samples. The relative standard deviation for the mean response factor from each of the unlabeled analytes (Table 2) and of the internal, surrogate, and alternate standards shall be less than or equal to the values in Table 6. The signal to noise ratio for the GC signal present in every selected ion current profile shall be greater than or equal to 2.5. The ion abundance ratios shall be within the control limits in Table 5.

6.1.2 Daily Performance Check.

6.1.2.1 Calibration Check. Inject one  $\mu$ l of solution number 4 from Table 2 or solution number 3 from Table 3. Calculate the relative



response factors (RRF's) for each compound and compare each of them to the corresponding mean RRF obtained during the initial calibration. The analyzer performance is acceptable if the measured RRF's for the labeled and unlabeled compounds for the daily run are within the limits of the mean values shown in Table 6. In addition the ion-abundance ratios shall be within the allowable control limits shown in Table 5.

6.1.2.2 Column Separation Check. Inject a solution of a mixture of PCDDs and PCDFs that documents resolution between 2,3,7,8-TCDD and other TCDD isomers. Resolution is defined as a valley between peaks that is less than 25% of the lower of the two peaks.

## 7. Quality Control

7.1 Sampling Train Collection Efficiency Check. Add 100 µl of the surrogate standards in Table 1 to the adsorbent cartridge of each train before each test.

7.2 Internal Standard Percent Recoveries. Recoveries of the internal standards must be between 40 to 130% for the tetrachloro hexachlorinated compounds while the range is 25 to 130% for the higher hepta- and octachlorinated homologues. If the internal standards do not meet the recovery requirements, the data will still be acceptable provided that the signal is equal to or greater than ten times the noise level.

7.3 Surrogate Recoveries. The surrogate recoveries are measured relative to the internal standards and are a measure of collection efficiency. All recoveries shall be between 70 and 130%. Poor recoveries for all the surrogates may be an indication of breakthrough in the sampling train. If the recovery of all standards is below 70%, the sampling runs must be repeated. As an alternative the sampling runs do not have to be repeated if the final results are divided by the fraction of surrogate recovery. Poor recoveries of isolated surrogate compounds should not be grounds for rejecting an entire set of samples.

7.4 Toluene Quality Assurance Rinse. Report the results of the toluene quality assurance rinse separately from the total sample catch. Do not add it to the total sample.

## 8. Quality Assurance

8.1 Applicability. When the method is used to analyze samples to demonstrate compliance with a source emission regulation, an audit sample must be analyzed.

8.2 Audit Procedure. The audit sample contains tetra through octa isomers of PCDD and PCDF. Concurrently, analyze the audit sample and a set of compliance samples in the same manner to evaluate the technique of the analyst and the standards preparation. The same analyst, analytical reagents, and analytical system shall be used both for the compliance samples and the EPA audit sample. If this condition is met, auditing of subsequent compliance analyses for any enforcement agency within seven days is not required.

8.3 Audit Sample Availability. The audit sample may be obtained by writing: Source Test Audit Coordinator (MD-77B), Quality Assurance Division, Atmospheric Research and Exposure Assessment Laboratory, U.S. Environmental Protection

Agency, Research Triangle Park, NC 27711 or by calling the Source Test Audit Coordinator (STAC) at (919) 541-7834. The request for the audit sample must be made at least 30 days prior to the scheduled compliance sample analysis.

8.4 Audit Results. Calculate the audit sample concentration according to the calculation procedure described in the audit instructions included with the audit sample. Fill in the audit sample concentration and the analyst's name on the audit response form included with the audit instructions. Send one copy to the EPA regional office or the appropriate enforcement agency. The STAC will return the EPA response to the laboratory being audited. Include this EPA response with the results of the compliance samples in appropriate reports to the EPA regional office or the appropriate enforcement agency. Include this information with subsequent analyses for any enforcement agency during the seven-day period.

## 9. Calculations

Same as Method 5, section 6 with the following additions.

### 9.1 Nomenclature.

$A_{ci}$  = Integrated ion current of the two ions characteristic of compound  $i$  in the calibration standard.

$A_{ci}^*$  = Integrated ion current of the two ions characteristic of the internal standard  $i$  in the calibration standard.

$A_{ci}^{**}$  = Integrated ion current of the two ions characteristic of surrogate compound  $i$  in the calibration standard.

$A_i$  = Integrated ion current of the two ions characteristic of compound  $i$  in the sample.

$A_i^*$  = Integrated ion current of the two ions characteristic of internal standard  $i$  in the sample.

$A_{ri}$  = Integrated ion current of the two ions characteristic of the recovery standard.

$A_{ci}$  = Integrated ion current of the two ions characteristic of surrogate compound  $i$  in the sample.

$C_c$  = Concentration of the compound of interest in the most dilute calibration solution, pg/µl.

$m_{ci}$  = Mass of compound  $i$  in the calibration standard injected into the analyzer, pg.

$m_{ci}^*$  = Mass of labeled compound  $i$  in the calibration standard injected into the analyzer, pg.

$m_{ci}^{**}$  = Mass of internal standard  $i$  added to the sample, pg.

$m_{ri}$  = Mass of recovery standard in the calibration standard injected into the analyzer, pg.

$m_{ci}$  = Mass of surrogate compound  $i$  in the calibration standard.

RRF<sub>i</sub> = Relative response factor.

RRF<sub>ri</sub> = Recovery standard response factor.

V = Final extract volume, µl.

### 9.2 Relative Response Factor.

$$RRF = 1/n \sum A_{ci} m_{ci}^* / (A_{ci}^* m_{ci}) \quad \text{Eq. 23-1}$$

### 9.3 Concentration of the PCDDs and PCDFs.

$$C_i = m_{ci}^* A_i / (A_{ci}^* RRF_i V_{m(tot)}) \quad \text{Eq. 23-2}$$

### 9.4 Recovery Standard Response Factor.

$$RRF_{ri} = A_{ci}^* m_{ri} / (A_{ri} m_{ci}^*) \quad \text{Eq. 23-3}$$

### 9.5 Recovery of Internal Standards (R\*).

$$R^* = (A_{ci}^* m_{ri} / A_{ri} RRF_{ri} m_{ci}^*) \times 100\% \quad \text{Eq. 23-4}$$

### 9.6 Surrogate Compound Response Factor.

$$RRF_s = A_{ci}^* m_{ci} / (A_{ci} m_{ci}^*) \quad \text{Eq. 23-5}$$

### 9.7 Recovery of Surrogate Compounds (R<sub>s</sub>).

$$R_s = (A_{ci} m_{ci}^* / A_{ci}^* RRF_{ri} m_{ci}) \times 100\% \quad \text{Eq. 23-6}$$

### 9.8 Theoretical Minimum Quantifiable Level (TMQL).

$$TMQL = C_c V / R^* \quad \text{Eq. 23-7}$$

## 9. Bibliography

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3. Thomason, J.R. (ed.). Analysis of Pesticide Residues in Human and Environmental Samples. U.S. Environmental Protection Agency. Research Triangle Park, NC. 1974.
4. Triangle Laboratories. Case Study: Analysis of Samples for the Presence of Tetra Through Octachloro-p-Dibenzodioxins and Dibenzofurans. Research Triangle Park, NC. 1988. 26 p.
5. U.S. Environmental Protection Agency. Method 8280—The Analysis of Polychlorinated Dibenzo-p-dioxin and Polychlorinated Dibenzofurans. In: Test Methods for Evaluating Solid Waste. Washington, DC. SW-846. September, 1986. 54 p.

TABLE 1.—COMPOSITION OF THE SAMPLE FORTIFICATION AND RECOVERY STANDARDS SOLUTIONS

Analyte	Concentration (pg/µl)
Internal standards:	
<sup>12</sup> C <sub>12</sub> -2,3,7,8-TCDD	100
<sup>12</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	100
<sup>12</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	100
<sup>12</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	100
<sup>12</sup> C <sub>12</sub> -2,3,7,8-TCDF	100
<sup>12</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	100
<sup>12</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	100
<sup>12</sup> C <sub>12</sub> -2,3,1,6,7,8-HpCDF	100
Surrogate Standards:	
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	100
<sup>13</sup> C <sub>12</sub> -2,3,1,7,8-PeCDF	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	100
Recovery standards:	
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	500
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	500



TABLE 2.—COMPOSITION OF THE INITIAL CALIBRATION SOLUTIONS (LOW)

Compound	Concentrations (pg/μL)—Solution No.—				
	1	2	3	4	5
Unlabeled analytes:					
2,3,7,8-TCDD.....	0.5	1	5	50	100
2,3,7,8-TCDF.....	0.5	1	5	50	100
1,2,3,7,8-PeCDD.....	2.5	5	25	250	500
1,2,3,7,8-PeCDF.....	2.5	5	25	250	500
2,3,4,7,8-PeCDF.....	2.5	5	25	250	500
1,2,3,4,7,8-HxCDD.....	2.5	5	25	250	500
1,2,3,6,7,8-HxCDD.....	2.5	5	25	250	500
1,2,3,7,8,9-HxCDD.....	2.5	5	25	250	500
1,2,3,4,7,8-HxCDF.....	2.5	5	25	250	500
1,2,3,6,7,8-HxCDF.....	2.5	5	25	250	500
1,2,3,7,8,9-HxCDF.....	2.5	5	25	250	500
2,3,4,6,7,8-HxCDD.....	2.5	5	25	250	500
1,2,3,4,6,7,8-HpCDD.....	2.5	5	25	250	500
1,2,3,4,6,7,8-HpCDF.....	2.5	5	25	250	500
1,2,3,4,7,8,9-HpCDF.....	2.5	5	25	250	500
OCDD.....	5	10	50	500	1000
OCDF.....	5	10	50	500	1000
Internal standards:					
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -OCDD.....	200	200	200	200	200
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF.....	100	100	100	100	100
Surrogate standards:					
<sup>14</sup> C <sub>12</sub> -2,3,7,8-TCDD.....	0.5	1	5	50	100
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF.....	2.5	5	25	250	500
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD.....	2.5	5	25	250	500
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF.....	2.5	5	25	250	500
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF.....	2.5	5	25	250	500
Alternate standard:					
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF.....	2.5	5	25	250	500
Recovery standards:					
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD.....	100	100	100	100	100

TABLE 3.—COMPOSITION OF THE INITIAL CALIBRATION SOLUTIONS (HIGH)

Compound	Concentrations (pg/μL)—Solution No.—				
	1	2	3	4	5
Unlabeled analytes:					
2,3,7,8-TCDD.....	5	50	100	500	1000
2,3,7,8-TCDF.....	5	50	100	500	1000
1,2,3,7,8-PeCDD.....	25	250	500	2500	5000
1,2,3,7,8-PeCDF.....	25	250	500	2500	5000
2,3,4,7,8-PeCDF.....	25	250	500	2500	5000
1,2,3,4,7,8-HxCDD.....	25	250	500	2500	5000
1,2,3,6,7,8-HxCDD.....	25	250	500	2500	5000
1,2,3,7,8,9-HxCDD.....	25	250	500	2500	5000
1,2,3,4,7,8-HxCDF.....	25	250	500	2500	5000
1,2,3,6,7,8-HxCDF.....	25	250	500	2500	5000
1,2,3,7,8,9-HxCDF.....	25	250	500	2500	5000
2,3,4,6,7,8-HxCDD.....	25	250	500	2500	5000
1,2,3,4,6,7,8-HpCDD.....	25	250	500	2500	5000
1,2,3,4,6,7,8-HpCDF.....	25	250	500	2500	5000
1,2,3,4,7,8,9-HpCDF.....	25	250	500	2500	5000
OCDD.....	50	500	1000	5000	10000



TABLE 3.—COMPOSITION OF THE INITIAL CALIBRATION SOLUTIONS (HIGH)—Continued

Compound	Concentrations (pg/μL)—Solution No.—				
	1	2	3	4	5
OCDF.....	50	500	1000	5000	10000
Internal standards:					
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -OCDD.....	200	200	200	200	200
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF.....	100	100	100	100	100
Surrogate standards:					
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD.....	5	50	100	500	1000
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF.....	25	250	500	2500	5000
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD.....	25	250	500	2500	5000
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF.....	25	250	500	2500	5000
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF.....	25	250	500	2500	5000
Alternate standard:					
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF.....	5	50	100	500	1000
Recovery standards:					
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD.....	100	100	100	100	100
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD.....	100	100	100	100	100

TABLE 4.—ELEMENTAL COMPOSITIONS AND EXACT MASSES OF THE IONS MONITORED BY HIGH RESOLUTION MASS SPECTROMETRY FOR PCDDs AND PCDFs

Descriptor No.	Accurate mass	Ion type	Elemental composition	Analyte
1.....	303.9016	M	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>4</sub> O	TCDF
	305.8987	M+2	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> O	TCDF
	315.9419	M	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>4</sub> O	TCDF (S)
	317.9389	M+2	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO	TCDF (S)
	319.8965	M	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> ClO <sub>2</sub>	TCDD
	321.8936	M+2	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO	TCDD
	327.8847	M	C <sub>12</sub> H <sub>8</sub> <sup>37</sup> Cl <sub>4</sub> O <sub>2</sub>	TCDD (S)
	331.9368	M	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>4</sub> O <sub>2</sub>	TCDD (S)
	333.9339	M+2	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO <sub>2</sub>	TCDD (S)
	375.8364	M+2	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO	HxCDFE
	354.9792	LOCK	C <sub>9</sub> F <sub>13</sub>	PFK
2.....	339.8597	M+2	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO	PeCDF
	341.8567	M+4	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>2</sub> <sup>37</sup> Cl <sub>2</sub> O	PeCDF
	351.9000	M+2	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO	PeCDF (S)
	353.8970	M+4	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>2</sub> <sup>37</sup> Cl <sub>2</sub> O	PeCDF (S)
	355.8546	M+2	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO <sub>2</sub>	PeCDD
	357.8518	M+4	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>2</sub> <sup>37</sup> Cl <sub>2</sub> O <sub>2</sub>	PeCDD
	367.8949	M+2	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO <sub>2</sub>	PeCDD (S)
	369.8919	M+4	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>2</sub> <sup>37</sup> Cl <sub>2</sub> O <sub>2</sub>	PeCDD (S)
	409.7974	M+2	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO	HpCPDE
	354.9792	LOCK	C <sub>9</sub> F <sub>13</sub>	PFK
3.....	373.8208	M+2	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO	HxCDF
	375.8178	M+4	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>2</sub> <sup>37</sup> Cl <sub>2</sub> O	HxCDF
	383.8639	M	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>4</sub> O	HxCDF (S)
	385.8610	M+2	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO	HxCDF (S)
	389.8157	M+2	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO <sub>2</sub>	HxCDD
	391.8127	M+4	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>2</sub> <sup>37</sup> Cl <sub>2</sub> O <sub>2</sub>	HxCDD
	401.8559	M+2	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO <sub>2</sub>	HxCDD (S)
	403.8529	M+4	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>2</sub> <sup>37</sup> Cl <sub>2</sub> O <sub>2</sub>	HxCDD (S)
	445.7555	M+4	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> Cl <sub>2</sub> O	OCDFE
	430.9729	LOCK	C <sub>9</sub> F <sub>13</sub>	PFK
4.....	407.7818	M+2	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO	HpCDF
	409.7789	M+4	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>2</sub> <sup>37</sup> Cl <sub>2</sub> O	HpCDF
	417.8253	M	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>4</sub> O	HpCDF (S)
	419.8220	M+2	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO	HpCDF (S)
	423.7766	M+2	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO <sub>2</sub>	HpCDD
	425.7737	M+4	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>2</sub> <sup>37</sup> Cl <sub>2</sub> O <sub>2</sub>	HpCDD
	435.8169	M+2	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO <sub>2</sub>	HpCDD (S)
	437.8140	M+4	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>2</sub> <sup>37</sup> Cl <sub>2</sub> O <sub>2</sub>	HpCDD (S)
	479.7165	M+4	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> Cl <sub>2</sub> O	NCDFE
	430.9729	LOCK	C <sub>9</sub> F <sub>13</sub>	PFK
5.....	441.7428	M+2	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO	OCDF
	443.7399	M+4	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>2</sub> <sup>37</sup> Cl <sub>2</sub> O	OCDF
	457.7377	M+2	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO <sub>2</sub>	OCDD
	459.7348	M+4	C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>2</sub> <sup>37</sup> Cl <sub>2</sub> O <sub>2</sub>	OCDD
	469.7779	M+2	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>3</sub> <sup>37</sup> ClO <sub>2</sub>	OCDD (S)
	471.7750	M+4	<sup>13</sup> C <sub>12</sub> H <sub>8</sub> <sup>35</sup> Cl <sub>2</sub> <sup>37</sup> Cl <sub>2</sub> O <sub>2</sub>	OCDD (S)



TABLE 4.—ELEMENTAL COMPOSITIONS AND EXACT MASSES OF THE IONS MONITORED BY HIGH RESOLUTION MASS SPECTROMETRY FOR PCDDs AND PCDFs—Continued

Descriptor No.	Accurate mass	Ion type	Elemental composition	Analyte
	513.6775 442.9728	M+4 <sup>+</sup> LOCK	C <sub>12</sub> <sup>13</sup> Cl <sub>5</sub> <sup>37</sup> Cl <sub>2</sub> O <sub>2</sub> C <sub>10</sub> F <sub>17</sub>	DCDPE PFK

(a) The following nucleic masses were used: H = 1.007825 C = 12.000000 <sup>13</sup>C = 13.003355 F = 18.9964 O = 15.994915 <sup>35</sup>Cl = 34.968853 <sup>37</sup>Cl = 36.965903 S = Labeled Standard

TABLE 5.—ACCEPTABLE RANGES FOR ION-ABUNDANCE RATIOS OF PCDDs AND PCDFs

Number of chlorine atoms	Ion type	Theoretical ratio	Control limits	
			Lower	Upper
4.....	M/M+2	0.77	0.65	0.89
5.....	M+2/M+4	1.55	1.32	1.78
6.....	M+2/M+4	1.24	1.05	1.43
6 <sup>1</sup> .....	M/M+2	0.51	0.43	0.59
7 <sup>2</sup> .....	M/M+2	0.44	0.37	0.51
7.....	M+2/M+4	1.04	0.88	1.20
8.....	M+2/M+4	0.89	0.76	1.02

<sup>1</sup> Used only for <sup>13</sup>C-HxCDF.

<sup>2</sup> Used only for <sup>13</sup>C-HpCDF.

TABLE 6.—MINIMUM REQUIREMENTS FOR INITIAL AND DAILY CALIBRATION RESPONSE FACTORS

Compound	Relative Response Factors	
	Initial calibration RSD	Daily calibration percentage difference
Unlabeled Analytes:		
2,3,7,8-TCDD.....	25	25
2,3,7,8-TCDF.....	25	25
1,2,3,7,8-PeCDD.....	25	25
1,2,3,7,8-PeCDF.....	25	25
2,3,4,7,8-PeCDF.....	25	25
1,2,3,7,8,9-HxCDD.....	25	25
1,2,3,6,7,8-HxCDD.....	25	25
1,2,3,7,8,9-HxCDF.....	25	25
1,2,3,4,7,8-HxCDF.....	25	25
1,2,3,6,7,8-HxCDF.....	25	25
1,2,3,7,8,9-HxCDF.....	25	25
2,3,4,6,7,8-HxCDF.....	25	25
1,2,3,4,6,7,8-HpCDD.....	25	25
1,2,3,4,6,7,8-HpCDF.....	25	25
OCDD.....	25	25
OCDF.....	30	30
Internal standards:		
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD.....	25	25
<sup>13</sup> C <sub>12</sub> -1,2,3,7-PeCDD.....	25	25
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD.....	25	25
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD.....	30	30
<sup>13</sup> C <sub>12</sub> -OCDD.....	30	30
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF.....	30	30
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF.....	30	30
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF.....	30	30
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF.....	30	30
Surrogate standards:		
<sup>37</sup> Cl <sub>2</sub> -2,3,7,8-TCDD.....	25	25
<sup>37</sup> Cl <sub>2</sub> -2,3,4,7,8-PeCDF.....	25	25
<sup>37</sup> Cl <sub>2</sub> -1,2,3,4,7,8-HxCDD.....	25	25
<sup>37</sup> Cl <sub>2</sub> -1,2,3,4,7,8-HxCDF.....	25	25

TABLE 6.—MINIMUM REQUIREMENTS FOR INITIAL AND DAILY CALIBRATION RESPONSE FACTORS—Continued

Compound	Relative Response Factors	
	Initial calibration RSD	Daily calibration percentage difference
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF.....	25	25
Alternate Standard:		
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF.....	25	25

#### Method 26—Determination of Hydrogen Chloride Emissions From Stationary Sources

##### 1. Applicability, Principle, Interferences, Precision, Bias, and Stability

1.1 Applicability. This method is applicable for determining hydrogen chloride (HCl) emissions from stationary sources.

1.2 Principle. An integrated sample is extracted from the stack and passed through dilute sulfuric acid. In the dilute acid, the HCl gas is dissolved and forms chloride (Cl<sup>-</sup>) ions. The Cl<sup>-</sup> is analyzed by ion chromatography (IC).

1.3 Interferences. Volatile materials which produce chloride ions upon dissolution during sampling are obvious interferences. Another likely interferent is diatomic chlorine (Cl<sub>2</sub>) gas which reacts to form HCl and hypochlorous acid (HOCl) upon dissolving in water. However, Cl<sub>2</sub> gas exhibits a low solubility in water and the use of acidic,

rather than neutral or basic collection solutions, greatly reduces the chance of dissolving any chlorine present. This method does not experience a significant bias when sampling a 400 ppm HCl gas stream containing 50 ppm Cl<sub>2</sub>. Sampling a 220 ppm HCl gas stream containing 180 ppm Cl<sub>2</sub> results in a positive bias of 3.4 percent in the HCl measurement.

1.4 Precision and Bias. The within-laboratory relative standard deviations are 6.2 and 3.2 percent at HCl concentrations of 3.9 and 15.3 ppm, respectively. The method does not exhibit a bias to Cl<sub>2</sub> when sampling at concentrations less than 50 ppm.

1.5 Stability. The collected samples can be stored for up to 4 weeks before analysis.

1.6 Detection Limit. The analytical detection limit of the method is 0.1 µg/ml.

##### 2. Apparatus

2.1 Sampling. The sampling train is shown in Figure 26-1, and component parts are discussed below.

2.1.1 Probe. Borosilicate glass, approximately 3/8-in. (9.5-mm) I.D. with a heating system to prevent moisture condensation. A 3/8-in. I.D. Teflon elbow should be attached to the inlet of the probe and a 1-in. (25.4-mm) length of 3/8-in. I.D. Teflon tubing should be attached to the open end of the elbow to permit the opening of the probe to be turned away from the gas stream. This reduces the amount of particulate entering the train. This probe configuration should be used when the concentration of particulate matter in the emissions is high. When high concentrations are not present, the Teflon elbow is not necessary, and the probe inlet may be perpendicular to the gas stream. A glass wool plug should not be used to remove particulate matter since a negative bias in the data could result. Instead, a Teflon filter (see § 2.1.5) should be installed at the inlet (for



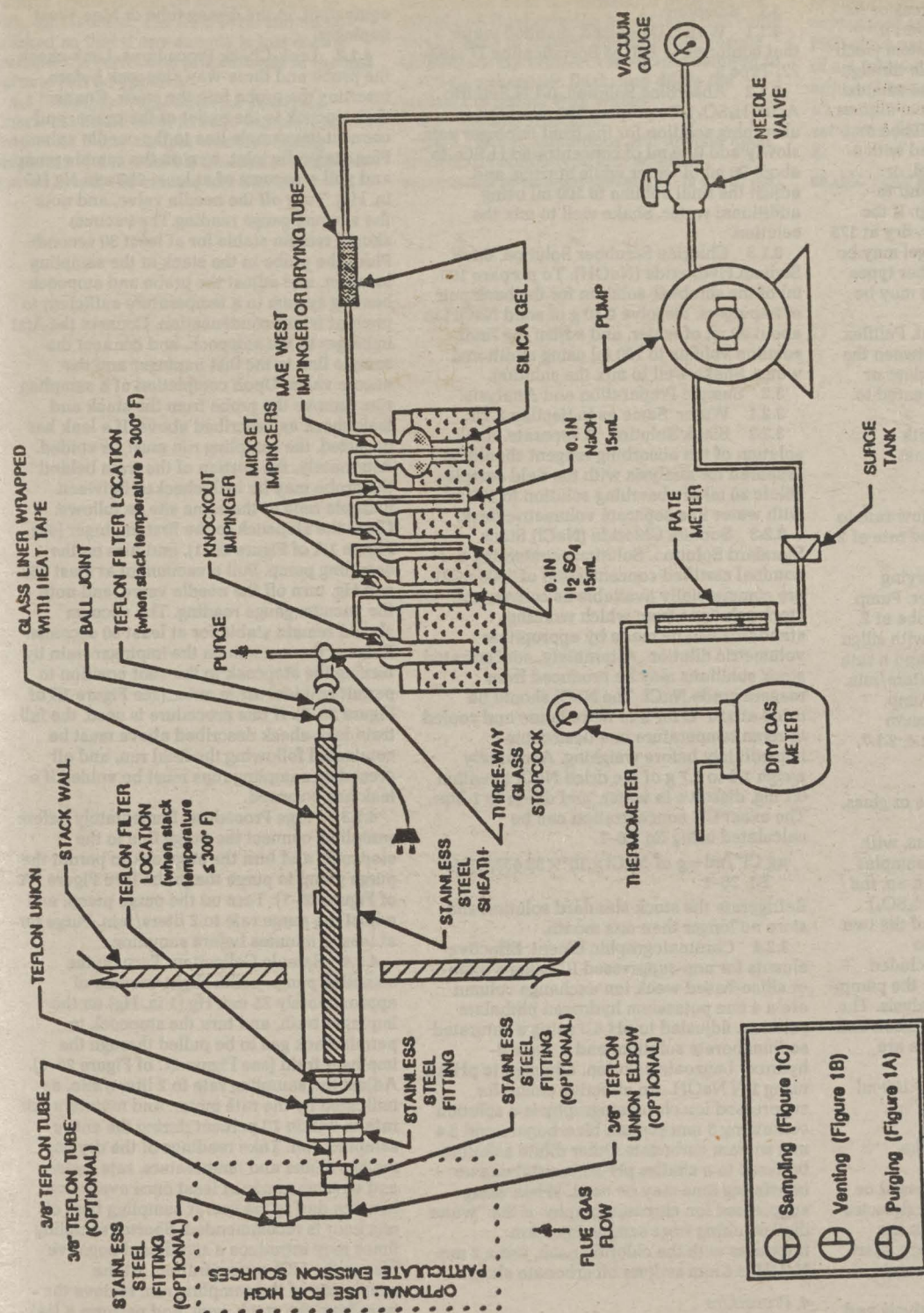
stack temperatures  $<300^{\circ}\text{F}$ ) or outlet (for stack temperatures  $>300^{\circ}\text{F}$ ) of the probe.

2.1.2 Three-way Stopcock. A borosilicate, three-way glass stopcock with a heating system to prevent moisture condensation. The heated stopcock should connect directly to the outlet of the probe and the inlet of the first impinger. The heating system should be capable of preventing condensation up to the inlet of the first impinger. Silicone grease may be used, if necessary, to prevent leakage.

2.1.3 Impingers. Four 30-ml midjet impingers with leak-free glass connectors. Silicone grease may be used, if necessary, to prevent leakage.

BILLING CODE 6550-50-M





**Figure 26-1. Sampling Train**

BILLING CODE 6560-50-C



For sampling at high moisture sources or for sampling times greater than one hour, a midjet impinger with a shortened stem (such that the gas sample does not bubble through the collected condensate) should be used in front of the first impinger.

**2.1.4 Drying Tube or Impinger.** Tube or impinger, of Mae West design, filled with 6- to 16-mesh indicating type silica gel, or equivalent, to dry the gas sample and to protect the dry gas meter and pump. If the silica gel has been used previously, dry at 175 °C (350 °F) for 2 hours. New silica gel may be used as received. Alternatively, other types of desiccants (equivalent or better) may be used.

**2.1.5 Filter.** A 25-mm Teflon mat, Pallflex TX40HI75 or equivalent. Locate between the probe liner and Teflon elbow in a glass or quartz filter holder in a filter box heated to 250 °F.

**2.1.6 Sample Line.** Leak-free, with compatible fittings to connect the last impinger to the needle valve.

**2.1.7 Rate Meter.** Rotameter, or equivalent, capable of measuring flow rate to within 2 percent of the selected flow rate of 2 liters/min.

**2.1.8 Purge Pump, Purge Line, Drying Tube, Needle Valve, and Rate Meter.** Pump capable of purging the sampling probe at 2 liters/min, with drying tube, filled with silica gel or equivalent, to protect pump, and a rate meter capable of measuring 0 to 5 liters/min.

**2.1.9 Stopcock Grease, Valve, Pump, Volume Meter, Barometer, and Vacuum Gauge.** Same as in Method 6, §§ 2.1.4, 2.1.7, 2.1.8, 2.1.10, 2.1.11, and 2.1.12.

## 2.2 Sample Recovery.

**2.2.1 Wash Bottles.** Polyethylene or glass, 500-ml or larger, two.

**2.2.2 Storage Bottles.** 100-ml glass, with Teflon-lined lids, to store impinger samples (two per sampling run). During clean-up, the two front impinger contents (0.1 N H<sub>2</sub>SO<sub>4</sub>) should be combined. The contents of the two rear impingers (0.1 N NaOH) may be discarded, as these solutions are included only to absorb Cl<sub>2</sub>, and thus protect the pump.

**2.3 Sample Preparation and Analysis.** The materials required for volumetric dilution and chromatographic analysis of samples are described below.

**2.3.1 Volumetric Flasks.** Class A, 100-ml size.

**2.3.2 Volumetric Pipets.** Class A, assortment. To dilute samples into the calibration range of the instrument.

**2.3.3 Ion Chromatograph.** Suppressed or non-suppressed, with a conductivity detector and electronic integrator operating in the peak area mode. Other detectors, strip chart recorders, and peak height measurements may be used provided the 5 percent repeatability criteria for sample analysis and the linearity criteria for the calibration curve can be met.

## 3. Reagents

Unless otherwise indicated, all reagents must conform to the specifications established by the Committee on Analytical Reagents of the American Chemical Society (ACS reagent grade). When such specifications are not available, the best available grade shall be used.

## 3.1 Sampling.

**3.1.1 Water.** Deionized, distilled water that conforms to ASTM Specification D 1193-77, Type 3.

**3.1.2 Absorbing Solution.** 0.1 N Sulfuric Acid (H<sub>2</sub>SO<sub>4</sub>). To prepare 100 ml of the absorbing solution for the front impinger pair, slowly add 0.28 ml of concentrated H<sub>2</sub>SO<sub>4</sub> to about 90 ml of water while stirring, and adjust the final volume to 100 ml using additional water. Shake well to mix the solution.

**3.1.3 Chlorine Scrubber Solution.** 0.1 N Sodium Hydroxide (NaOH). To prepare 100 ml of the scrubber solution for the back pair of impingers, dissolve 0.40 g of solid NaOH in about 90 ml of water, and adjust the final solution volume to 100 ml using additional water. Shake well to mix the solution.

## 3.2 Sample Preparation and Analysis.

**3.2.1 Water.** Same as in Section 3.1.1.

**3.2.2 Blank Solution.** A separate blank solution of the absorbing reagent should be prepared for analysis with the field samples. Dilute 30 ml of absorbing solution to 100 ml with water in a separate volumetric flask.

**3.2.3 Sodium Chloride (NaCl) Stock Standard Solution.** Solutions containing a nominal certified concentration of 1000 mg/l are commercially available as convenient stock solutions from which working standards can be made by appropriate volumetric dilution. Alternatively, concentrated stock solutions may be produced from reagent grade NaCl. The NaCl should be dried at 110 °C for 2 or more hours and cooled to room temperature in a desiccator immediately before weighing. Accurately weigh 1.6 to 1.7 g of the dried NaCl to within 0.1 mg, dissolve in water, and dilute to 1 liter. The exact Cl<sup>-</sup> concentration can be calculated using Eq. 23-1.

$$\mu\text{g Cl}^-/\text{ml} = \text{g of NaCl} \times 10^3 \times 35.453/58.44$$

Eq. 23-1

Refrigerate the stock standard solution and store no longer than one month.

**3.2.4 Chromatographic Eluent.** Effective eluents for non-suppressed IC using a resin- or silica-based weak ion exchange column are a 4 mm potassium hydrogen phthalate solution, adjusted to pH 4.0 using a saturated sodium borate solution, and a 4 mm 4-hydroxy benzoate solution, adjusted to pH 8.8 using 1 N NaOH. An effective eluent for suppressed ion chromatography is a solution containing 3 mm sodium bicarbonate and 2.4 mm sodium carbonate. Other dilute solutions buffered to a similar pH and containing no interfering ions may be used. When using suppressed ion chromatography, if the "water dip" resulting from sample injection interferes with the chloride peak, use a 2 mm NaOH/2.4 mm sodium bicarbonate eluent.

## 4. Procedure

### 4.1 Sampling.

**4.1.1 Preparation of Collection Train.** Prepare the sampling train as follows: Pour 15 ml of the absorbing solution into each of the first two impingers, and add 15 ml of scrubber solution to the third and fourth impingers. Connect the impingers in series with the knockout impinger first, followed by the two impingers containing absorbing solution and the two containing the scrubber solution. Place a fresh charge of silica gel, or

equivalent, in the drying tube or Mae West impinger.

**4.1.2 Leak-Check Procedures.** Leak-check the probe and three-way stopcock before inserting the probe into the stack. Connect the stopcock to the outlet of the probe, and connect the sample line to the needle valve. Plug the probe inlet, turn on the sample pump, and pull a vacuum of at least 250 mm Hg (10 in. Hg). Turn off the needle valve, and note the vacuum gauge reading. The vacuum should remain stable for at least 30 seconds. Place the probe in the stack at the sampling location, and adjust the probe and stopcock heating system to a temperature sufficient to prevent water condensation. Connect the first impinger to the stopcock, and connect the sample line to the last impinger and the needle valve. Upon completion of a sampling run, remove the probe from the stack and leak-check as described above. If a leak has occurred, the sampling run must be voided. Alternately, the portion of the train behind the probe may be leak-checked between multiple runs at the same site as follows: Close the stopcock to the first impinger (see Figure 1A of Figure 26-1), and turn on the sampling pump. Pull a vacuum of at least 250 mm Hg, turn off the needle valve, and note the vacuum gauge reading. The vacuum should remain stable for at least 30 seconds. Release the vacuum on the impinger train by turning the stopcock to the vent position to permit ambient air to enter (see Figure 1B of Figure 26-2). If this procedure is used, the full train leak-check described above must be conducted following the final run, and all preceding sampling runs must be voided if a leak has occurred.

**4.1.3 Purge Procedure.** Immediately before sampling, connect the purge line to the stopcock, and turn the stopcock to permit the purge pump to purge the probe (see Figure 1A of Figure 26-1). Turn on the purge pump, and adjust the purge rate to 2 liters/min. Purge for at least 5 minutes before sampling.

**4.1.4 Sample Collection.** Turn on the sampling pump, pull a slight vacuum of approximately 25 mm Hg (1 in. Hg) on the impinger train, and turn the stopcock to permit stack gas to be pulled through the impinger train (see Figure 1C of Figure 26-3). Adjust the sampling rate to 2 liters/min, as indicated by the rate meter, and maintain this rate to within 10 percent during the entire sampling run. Take readings of the dry gas meter volume and temperature, rate meter, and vacuum gauge at least once every five minutes during the run. A sampling time of one hour is recommended. Shorter sampling times may introduce a significant negative bias in the HCl concentration. At the conclusion of the sampling run, remove the train from the stack, cool, and perform a leak-check as described in Section 4.1.2.

**4.2 Sample Recovery.** Disconnect the impingers after sampling. Quantitatively transfer the contents of the first three impingers (the knockout impinger and the two absorbing solution impingers) to a leak-free storage bottle. Add the water rinses of each of these impingers and connecting glassware to the storage bottle. The contents of the scrubber impingers and connecting glassware rinses may be discarded. The



sample bottle should be sealed, shaken to mix, and labeled. The fluid level should be marked so that if any sample is lost during transport, a correction proportional to the lost volume can be applied.

4.3 Sample Preparation for Analysis. Check the liquid level in each sample, and determine if any sample was lost during shipment. If a noticeable amount of leakage has occurred, the volume lost can be

determined from the difference between the initial and final solution levels, and this value can be used to correct the analytical results. Quantitatively transfer the sample solution to a 100-ml volumetric flask, and dilute the solution to 100 ml with water.

4.4 Sample Analysis.

4.4.1 The IC conditions will depend upon analytical column type and whether suppressed or non-suppressed IC is used. An

example chromatogram from a non-suppressed system using a 150-mm Hamilton PRP-X100 anion column, a 2 ml/min flow rate of a 4 mM 4-hydroxy benzoate solution adjusted to a pH of 8.8 using 1 N NaOH, a 50  $\mu$ l sample loop, and a conductivity detector set on 1.0  $\mu$ S full scale is shown in Figure 26-2.

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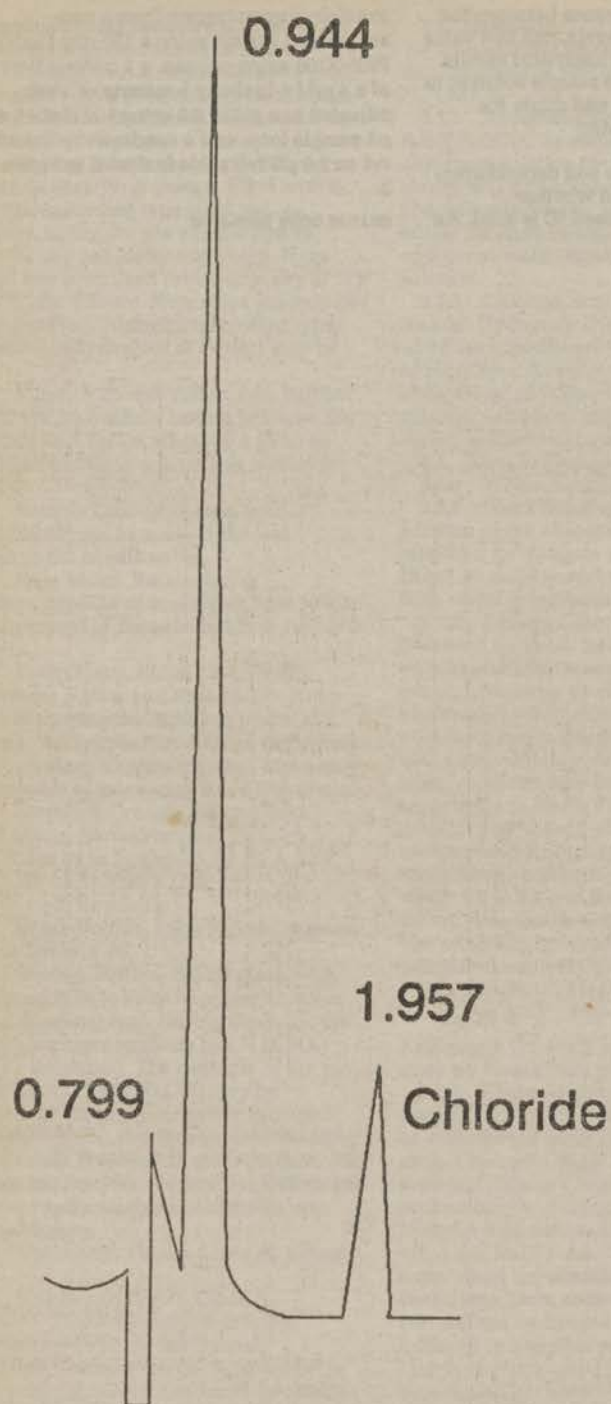


Figure 26-2. Example Chromatogram



4.4.2 Before sample analysis, establish a stable baseline. Next, inject a sample of water, and determine if any  $\text{Cl}^-$  appears in the chromatogram. If  $\text{Cl}^-$  is present, repeat the load/injection procedure until no  $\text{Cl}^-$  is present. At this point, the instrument is ready for use.

4.4.3 First, inject the calibration standards covering an appropriate concentration range, starting with the lowest concentration standard. Next, inject in duplicate, a QC sample followed by a water blank and the field samples. Finally, repeat the injection of calibration standards to allow compensation for any drift in the instrument during analysis of the field samples. Measure the  $\text{Cl}^-$  peak areas or heights of the samples. Use the average response from the duplicate injections to determine the field sample concentrations using a linear calibration curve generated from the standards.

4.5 Audit Analysis. There is currently no validated audit sample for this method. It is recommended to analyze a QC sample along with the field samples as described above.

## 5. Calibration

5.1 Dry Gas Metering System, Thermometers, Rate Meter, and Barometer. Same as in Method 8, sections 5.1, 5.2, 5.3, and 5.4.

5.2 Calibration Curve for Ion Chromatograph. To prepare calibration standards, dilute given volumes (1.0 ml or greater) of the stock standard solution, with 0.1 N  $\text{H}_2\text{SO}_4$  (section 3.1.2) to convenient volumes. Prepare at least four standards that are within the linear range of the instrument and which cover the expected concentration range of the field samples. Analyze the standards as instructed in section 4.4.3, beginning with the lowest concentration standard. Determine the peak measurements, and plot individual values versus  $\text{Cl}^-$  concentration in  $\mu\text{g}/\text{ml}$ . Draw a smooth curve through the points. Use linear regression to calculate a formula describing the resulting linear curve.

## 6. Quality Assurance

6.1 Applicability. When the method is used to analyze samples to demonstrate compliance with a source emission regulation, a set of two audit samples must be analyzed.

6.2 Audit Procedure. The audit samples are chloride solutions. Concurrently analyze the two audit samples and a set of compliance samples in the same manner to evaluate the technique of the analyst and the standards preparation. The same analyst, analytical reagents, and analytical system shall be used both for compliance samples and the EPA audit samples. If this condition is met, auditing of subsequent compliance analyses for the same enforcement agency within 30 days is not required. An audit sample set may not be used to validate different sets of compliance samples under the jurisdiction of different enforcement agencies, unless prior arrangements are made with both enforcement agencies.

6.3 Audit Sample Availability. The audit samples may be obtained by writing or calling the EPA regional office or the appropriate enforcement agency. The request

for the audit samples must be made at least 30 days prior to the scheduled compliance sample analyses.

6.4 Audit Results. Calculate the concentrations in  $\text{mg}/\text{dscm}$  using the specified sample volume in the audit instructions.

Note: Indication of acceptable results may be obtained immediately by reporting the audit results in  $\text{mg}/\text{dscm}$  and compliance results in total  $\mu\text{g HCl}/\text{sample}$  to the responsible enforcement agency.

Include the results of both audit samples, their identification numbers, and the analyst's name with the results of the compliance determination samples in appropriate reports to the EPA regional office or the appropriate enforcement agency. Include this information with subsequent analyses for the same enforcement agency during the 30-day period.

The concentrations of the audit samples obtained by the analyst shall agree within 10 percent of the actual concentrations. If the 10 percent specification is not met, reanalyze the compliance samples and audit samples, and include initial and reanalysis values in the test report.

Failure to meet the 10 percent specification may require retests until the audit problems are resolved. However, if the audit results do not affect the compliance or noncompliance status of the affected facility, the Administrator may waive the reanalysis requirement, further audits, or retests and accept the results of the compliance test. While steps are being taken to resolve audit analysis problems, the Administrator may also choose to use the data to determine the compliance or noncompliance status of the affected facility.

## 7. Calculations

Retain at least one extra decimal figure beyond those contained in the available data in intermediate calculations, and round off only the final answer appropriately.

7.1 Sample Volume, Dry Basis, Corrected to Standard Conditions. Calculate the sample volume using Eq. 6-1 of Method 8.

7.2 Total  $\mu\text{g HCl}$  Per Sample.

$$m = (S - B)(100)(36.46) / (35.453) = (102.84)(S - B) \quad \text{Eq. 26-2}$$

Where:

m = Mass of HCl in sample,  $\mu\text{g}$ .  
S = Concentration of sample,  $\mu\text{g Cl}^-/\text{ml}$ .  
B = Concentration of blank,  $\mu\text{g Cl}^-/\text{ml}$ .  
100 = Volume of filtered and diluted sample, ml.  
36.46 = Molecular weight of HCl,  $\mu\text{g}/\mu\text{g-mole}$ .

35.453 = Atomic weight of Cl,  $\mu\text{g}/\mu\text{g-mole}$ .

7.3 Concentration of HCl in the Flue Gas.

$$C = K m / V_{m(std)} \quad \text{Eq. 26-3}$$

Where:

C = Concentration of HCl, dry basis,  $\text{mg}/\text{dscm}$ .

K =  $10^{-3} \text{ mg}/\mu\text{g}$ .

m = Mass of HCl in sample,  $\mu\text{g}$ .

$V_{m(std)}$  = Dry gas volume measured by the dry gas meter, corrected to standard conditions,  $\text{dscm}$ .

## 7. Bibliography

1. Steinsberger, S.C. and J.H. Margeson, "Laboratory and Field Evaluation of a

Methodology for Determination of Hydrogen Chloride Emissions from Municipal and Hazardous Waste Incinerators," U.S. Environmental Protection Agency, Office of Research and Development, Report No. 600/3-89/064, April, 1989.

2. State of California, Air Resources Board, Method 421, "Determination of Hydrochloric Acid Emissions from Stationary Sources," March 18, 1987.

3. Entropy Environmentalists Inc., "Laboratory Evaluation of a Sampling and Analysis Method for Hydrogen Chloride Emissions from Stationary Sources: Interim Report," EPA Contract No. 68-02-4442, Research Triangle Park, North Carolina, January 22, 1988.

[FR Doc. 89-28723 Filed 12-19-89; 3:45 am]

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## 40 CFR Part 60

[AD-FRL-3693-9]

### Standards of Performance for new Stationary Sources; Revision of Procedure 1 of Appendix F and Addition of Performance Specification 4A to Appendix B

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule and notice of public hearing.

SUMMARY: The purpose of this proposed rule is to revise Procedure 1 of Appendix F to make it applicable without further revision for all regulated pollutants, as was intended originally. In addition, Performance Specification 4A is being added to Appendix B to allow the performance testing of carbon monoxide continuous emissions monitoring systems (CEMS) at municipal wastes combustion facilities.

A public hearing will be held, if requested, to provide interested persons an opportunity for oral presentation of data, views, or arguments concerning the proposed rule.

DATES: Comments. Comments must be received on or before March 12, 1990.

Public Hearing. If anyone contacts EPA requesting to speak at a public hearing by January 10, 1990, a public hearing will be held February 5, 1990 beginning at 10:00 a.m. Persons interested in attending the hearing should call the contact mentioned under ADDRESSES to verify that a hearing will be held.

Request to Speak at Hearing. Persons wishing to present oral testimony must contact EPA by January 10, 1990.



**ADDRESSES: Comments.** Comments should be submitted (in duplicate if possible) to: Air Docket (LE-131), Attention: Docket Number A-89-15, U.S. Environmental Protection Agency, Room M-1500, 1st Floor, Waterside Mall, 401 M Street, SW., Washington, DC 20460.

**Public Hearing.** If anyone contacts EPA requesting a public hearing, it will be held at EPA's Emission Measurement Laboratory, Research Triangle Park, North Carolina. Persons interested in attending the hearing or wishing to present oral testimony should notify Gary McAlister, Emission Measurement Branch (MD-19), Technical Support Division, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone (919) 541-1062.

**Docket.** Docket No. A-89-15, containing materials relevant to this rulemaking, is available for public inspection and copying between 8:00 a.m. and 3:30 p.m., Monday through Friday, at EPA's Air Docket, Room M-1500, 1st Floor, Waterside Mall, 401 M Street, SW., Washington DC 20460. A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** Gary McAlister or Roger Shigehara, Emission Measurement Branch (MD-19), Technical Support Division, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone number (919) 541-1062.

#### **SUPPLEMENTARY INFORMATION:**

#### **I. The Rulemaking**

Under Subparts Ca and Ea, EPA is proposing to require the use of CEMS as the performance test method for carbon monoxide and other gases. When the CEMS is the designated performance test method, the source owner is required to conduct a performance test of the CEMS and implement the Quality Assurance provisions of Appendix F, Procedure 1. This action proposes the performance specifications to be used for the performance test and the revisions to Procedure 1 to include carbon monoxide CEMS.

#### **II. Administrative Requirements**

##### **A. Public Hearing**

A public hearing will be held, if requested, to discuss the proposed rule in accordance with section 307(d)(5) of the Clean Air Act. Persons wishing to make oral presentations should contact EPA at the address given in the **ADDRESSES** section of this preamble. Oral presentations will be limited to 15 minutes each. Any member of the public may file a written statement with EPA before, during, or within 30 days after

the hearing. Written statements should be addressed to the Air Docket address given in the **ADDRESSES** section of this preamble.

A verbatim transcript of the hearing and written statements will be available for public inspection and copying during normal working hours at EPA's Air Docket in Washington DC (see **ADDRESSES** section of this preamble).

##### **B. Docket**

The docket is an organized and complete file of all the information submitted to or otherwise considered by EPA in the development of this proposed rulemaking. The principal purposes of the docket are to: (1) Allow interested parties to identify and locate documents so that they can effectively participate in the rulemaking process, and (2) serve as the record in case of judicial review (except for interagency review materials) [section 307(d)(7)(A)].

##### **C. Office of Management and Budget Review**

Executive Order 12291 Review. Under Executive Order 12291, EPA must judge whether a regulation is "major" and, therefore, subject to the requirement of a regulatory impact analysis. This rulemaking would not result in any of the adverse economic effects set forth in section 1 of the Order as grounds for finding a regulation to be a "major rule." It will not have an annual effect on the economy of \$100 million or more, nor will it result in a major increase in costs or prices. There will be no significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic or export markets. This regulation was submitted to the Office of Management and Budget for review as required by Executive Order 12291.

##### **D. Regulatory Flexibility Act Compliance**

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this attached rule, if promulgated, will not have an economic impact on small entities because no additional costs will be incurred.

This rule does not change any information collection requirements currently approved by OMB under the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.* Information requirements contained in Appendices B and F of 40 CFR Part 60 are cleared under OMB control number 2060-0022.

#### **List of Subjects in 40 CFR Part 60**

Air pollution control, Intergovernmental relations, Reporting and recordkeeping requirements, Incorporation by reference, and Incinerators.

Dated: November 30, 1989.

William K. Reilly,  
Administrator.

It is proposed that 40 part 60 be amended as follows:

#### **PART 60—[AMENDED]**

1. The authority citation for part 60 continues to read as follows:

Authority: 42 U.S.C. 7401, 7411, 7414, 7416, 7601.

#### **Appendix F [Amended]**

2. In Appendix F, by revising section 5.2 and adding a new paragraph 5.2.3 to Procedure 1 to read as follows:

5.2 Excessive Audit Inaccuracy. If the RA, using the RATA, CGA, or RAA exceeds the criteria in section 5.2.3, the CEMS is out-of-control. If the CEMS is out-of-control, take necessary corrective action to eliminate the problem. Following corrective action, the source owner or operator must audit the CEMS with a RATA, CGA, or RAA to determine if the CEMS is operating within the specifications. A RATA must always be used following an out-of-control period resulting from a RATA. The audit following corrective action does not require analysis of EPA performance audit samples. If audit results show the CEMS to be out-of-control, the CEMS operator shall report both the audit showing the CEMS to be out-of-control and the results of the audit following corrective action showing the CEMS to be operating within specifications.

5.2.3 Criteria for Excessive Audit Inaccuracy. Unless specified otherwise in the applicable subpart, the criteria for excessive inaccuracy are:

- (1) For the RATA, the allowable RA in the applicable PS in Appendix B.
- (2) For the CGA,  $\pm 15$  percent of the average audit value or  $\pm 5$  ppm, whichever is greater.
- (3) For the RAA,  $\pm 15$  percent of the three run average or  $\pm 7.5$  percent of the applicable standard, whichever is greater.

3. In Appendix F, by revising entry 11 of Figure 1 of Procedure 1 to read as follows:

CEMS span values as per the applicable regulation: \_\_\_\_\_ (e.g., SO<sub>2</sub> \_\_\_\_\_ ppm, NO<sub>x</sub> \_\_\_\_\_ ppm).

4. By adding Performance Specification 4A to Appendix B to read as follows:



**Appendix B—Performance Specifications—Performance Specification 4A—Specifications and Test Procedures for Carbon Monoxide Continuous Emission Monitoring Systems in Statutory Sources**

**1. Applicability and Principle**

**1.1 Applicability.**

1.1.1 This specification is to be used for evaluating the acceptability of carbon monoxide (CO) continuous emission monitoring systems (CEMS) at the time of or soon after installation and whenever specified in an applicable subpart of the regulations.

1.1.2 This specification is not designed to evaluate the installed CEMS performance over an extended period of time nor does it identify specific calibration techniques and other auxiliary procedures to assess CEMS performance. The source owner or operator, however, is responsible to calibrate, maintain, and operate the CEMS. To evaluate CEMS performance, the Administrator may require, under section 114 of the Act, the source owner or operator to conduct CEMS performance evaluations at other times besides the initial test. See 60.13(c).

1.1.3 The definitions, installation specifications, test procedures, data reduction procedures for determining calibration drifts (CD) and relative accuracy (RA), and reporting of Performance Specification 2 (PS 2), sections 2, 3, 5, 6, 8, and 9 apply to this specification.

1.2 Principle. Reference method (RM), CD and RA tests are conducted to determine that the CEMS conforms to the specification.

**2. Performance and Equipment Specifications**

2.1 Instrument Zero and Span. This specification is the same as section 4.1 of PS 2.

2.2 Interference Check. The CEMS must be shown to be free from the effects of any interferences.

2.3 Calibration Drift. The CEMS calibration must not drift or deviate from the reference value of the calibration gas, gas cell, or optical filter by more than 5 percent of the established span value for 6 out of 7 test days.

2.4 Relative Accuracy. The RA of the CEMS shall be no greater than 10 percent of the mean value of the RM test data in terms of the units of the emission standard or 5 ppm, whichever is greater. Under conditions where the average CO emissions are less than 10 percent of the standard, a cylinder gas audit may be performed in place of the RA test. In this case, the cylinder gas shall contain CO in 12 percent carbon dioxide as an interference check.

**3. Relative Accuracy Test Procedure**

3.1 Sampling Strategy for RM Tests, Correlation of RM and CEMS Data, Number of RM Tests, and Calculations. These are the same as PS 2, sections 7.1, 7.2, 7.3, and 7.5, respectively.

3.2 Reference Methods. Unless otherwise specified in an applicable subpart of the regulation, Method 10 is the RM for this PS. When evaluating nondispersive infrared continuous emission analyzers, Method 10

shall use the alternative interference trap specified in section 10.1 of the method. Method 10A or 10B is an acceptable alternative to Method 10.

**4. Bibliography**

4.1 Same as in Performance Specification 4, section 4.

[FR Doc. 89-28725 Filed 12-15-89; 8:45 am]

BILLING CODE 6560-50-M

**40 CFR Part 60**

[AD-FRL-3694-5]

**Emission Guidelines: Municipal Waste Combustors**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed guidelines and notice of public hearing.

**SUMMARY:** This notice proposes emission guidelines and compliance schedules for use by States in developing State regulations to control emissions from existing municipal waste combustors (MWC's). The proposed emission guidelines implement section 111(d) of the Clean Air Act (CAA) and are based on the Administrator's determination that MWC emissions cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare. The intent of the proposed emission guidelines is to initiate State action to develop State regulations controlling MWC emissions from existing MWC's to the level achievable by applying the best demonstrated system of continuous emission reduction, considering costs, nonair quality health and environmental impacts, and energy requirements.

These are proposed rather than final guidelines, and comments are requested. The EPA will consider all comments and new information received during the public comment period, and will make changes to the guidelines, where appropriate, based on these comments.

If requested, a public hearing will be held to provide interested parties an opportunity for oral presentations of data, views, or arguments concerning the proposed emission guidelines.

**DATES:** Comments must be received on or before March 1, 1990.

**Public Hearings.**—Public hearings will be held in Boston, Massachusetts, on January 22 and 23, 1990; in Detroit, Michigan, on January 25 and 26, 1990; and in Seattle, Washington, on January 30 and 31, 1990. All hearings will start at 9:00 a.m. Persons wishing to present oral testimony at the public hearings must call Ms. Ann Eleanor at (919) 541-5578

before January 15, 1990, for the Boston hearing; January 18, 1990, for the Detroit hearing; and January 23, 1990, for the Seattle hearing. Each speaker will be allowed up to 10 minutes, and each group or organization will be allowed a maximum of 20 minutes to speak. If no one requests to speak at a hearing before these dates, the hearing may be cancelled. Persons interested in attending the hearings should also call Ms. Ann Eleanor at (919) 541-5578 to verify that a hearing will be held.

**ADDRESSES: Comments.**—Comments should be submitted (in duplicate if possible) to: Air Docket (LE-131), Attention Docket No. A-89-08, Room M1500, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460.

**Public Hearing.**—The three scheduled public hearings, if requested, will be held at the following locations:

1. Presidents Ballroom, Hyatt Regency, 575 Memorial Drive, Cambridge, Massachusetts;
2. Cobo Hall, Cobo Convention Center, One Washington Boulevard, Detroit, Michigan;
3. Rainier Room, Seattle Center, 305 Harrison Street, Seattle, Washington.

Persons interested in attending a hearing or wishing to present oral testimony should notify Ms. Ann Eleanor, Standards Development Branch (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone number (919) 541-5578.

**Draft Guideline Documents.**—The draft guideline document for the proposed emission guidelines consists of one guideline document and this **Federal Register** preamble and proposed guideline. There are also five other background reports used in development of the proposed guidelines. See **SUPPLEMENTARY INFORMATION** for a listing of these documents. Copies of this **Federal Register** notice, the draft guideline document, and the five other background reports, have been provided to State air pollution control agencies, owners and operators of existing MWC's, and interested trade, professional, and environmental organizations for review and distribution. Others interested in reviewing these documents should contact their respective trade, professional, or environmental organization.

**Docket.**—Docket No. A-89-08, containing the draft guideline document and other supporting information used in developing the proposed emission guidelines, is available for public



inspection and copying between 8:00 a.m. and 4:00 p.m., Monday through Friday, at the EPA's Air Docket, Room M1500, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460. A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** Mr. Walter Stevenson [(919) 541-5264] or Mr. Fred Porter [(919) 541-5251], Standards Development Branch, Emission Standards Division (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

**SUPPLEMENTARY INFORMATION:** The draft guideline document is entitled, "Municipal Waste Combustors—Background Information for Proposed Guidelines for Existing Facilities", EPA-450/3-89-27e, August 1989. The five other key technical documents used in developing the proposed guidelines are as follows:

1. "Municipal Waste Combustors—Background Information for Proposed Standards: Post-Combustion Technology Performance", EPA-450/3-89-27c, August 1989;

2. "Municipal Waste Combustion Assessment: Combustion Control at Existing Facilities", EPA-600/8-89-057, August 1989;

3. "Municipal Waste Combustion Assessment, Technical Basis for Good Combustion Practice", EPA-600/8-89-063, August 1989;

4. "Municipal Waste Combustors—Background Information for Proposed Standards: Cost Procedures", EPA-450/3-89-27a, August 1989; and

5. "Economic Impact of Air Pollutant Emission Guidelines for Existing MWC's", EPA-450/3-89-005, August 1989.

This draft guideline document and other listed background reports are being provided at no cost to State air pollution control agencies, owners and operators of existing MWC's, and interested trade, professional, and environmental organizations upon request. However, because of the number and size of the reports involved and the associated printing and distribution costs, only a limited number of sets were printed. The reports are being provided to trade groups, and professional and environmental organizations with the understanding that they will allow members access to their document sets. Persons wishing to review the documents should contact their respective State agency or organization. If the agency or organization does not have the documents, a set will be provided to the

organization for the use of their membership.

The following outline is provided to aid in reading the preamble to the proposed emission guidelines.

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- C. Emission Guidelines Decision Summary
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#### VII. Considerations for Prevention of Significant Deterioration

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- B. Docket
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#### I. Introduction

##### A. Summary of Regulatory Decision

Several studies were performed to determine whether municipal waste combustor (MWC) emissions should be regulated and, if so, under what section of the Clean Air Act (CAA). As set forth in the advance notice of proposed rulemaking (ANPRM) (52 FR 25399, July 7, 1987), the Agency has decided to regulate air emissions from MWC's under Section 111. This notice therefore proposes emission guidelines for regulation by the States of existing MWC's under section 111(d) of the CAA. Under a separate regulatory action in today's *Federal Register*, standards for new MWC's are being proposed pursuant to section 111(b) of the CAA. The Agency has developed an overall agenda to address other municipal solid waste (MSW) disposal issues, and today's air emission guidelines are just one component.

##### B. Emission Guidelines—General Goals

The CAA requires the promulgation of standards of performance under Section 111(b) for categories of new sources which may contribute to the endangerment of public health or welfare. When standards of performance have been promulgated under section 111(b) for a designated pollutant, the CAA, under section 111(d), requires that States submit plans which establish emission standards for existing sources and provide for implementation and enforcement of emission standards for the designated pollutant. In general, this means that control under section 111(d) is appropriate when the pollutant may cause or contribute to endangerment of public health or welfare but is not known to be "hazardous" within the meaning of section 112 and is not controlled under sections 108-110 because, for example, it is not emitted from "numerous or diverse" sources as required by section 108.

For ease of discussion, pollutants which have been regulated pursuant to the above conditions are defined in the proposed regulations as "designated pollutants," and existing facilities which emit these pollutants are defined in the proposed regulations as "designated



facilities." Designated pollutants can, at a later time, be listed as criteria pollutants under section 108(a) or as hazardous air pollutants under section 112(b)(1)(A). As specified in 40 CFR 60.23, States shall adopt and submit to the Administrator a plan implementing the section 111(d) guidelines within 9 months after the promulgation of the guidelines. Assuming that the final guidelines will be promulgated in December 1990, all States would have to adopt and submit a plan by September 1991. The CAA further requires that the procedure for State submission of a plan shall be similar to the procedure for submission of State implementation plans under section 110 and mandates that EPA shall prescribe a plan according to procedures similar to those in section 110(c) if the State fails to submit a "satisfactory plan."

Section 111(d) requires EPA to approve State emission standards only if they reflect application of the best systems of emission reduction that are reasonably available for designated facilities. Accordingly, EPA has published guideline documents (discussed above) which describe available systems of emission control, identify the best demonstrated systems considering costs, nonair quality health and environmental impacts, and energy requirements, and identify the emission limitations that reflect the application of such systems. State plans will be approved if they include an emission standard equal to or more stringent than that specified in the guideline. For health-related pollutants, as is the case for MWC emissions, State emission standards must ordinarily be at least as stringent as the corresponding EPA guidelines to be approved (section 60.24(c)).

It is recognized, however, that application of today's proposed guidelines, may be unreasonable in some situations (e.g., little useful facility life left, replacement in progress) and justify some relief on a case-by-case basis, provided that a compelling justification is demonstrated in each case. Few such exceptions are expected in the case of MWC's for several reasons. First, the guidelines reflect the EPA's judgment of the degree of control that can be attained by various classes of sources without unreasonable costs, including considerations of retrofit costs, and without unreasonable nonair quality health and environmental impacts, or unreasonable energy requirements. In fact, particular sources within a class may be able to achieve greater control than the presumptive emission guidelines. Second, the

development of the emission guidelines was carried out in the context of a nationwide program encompassing an entire class of sources without consideration of the local air quality conditions that must be considered in nonattainment areas or in prevention of significant deterioration (PSD) in accordance with permitting activities associated with the CAA. In some cases, State standards may be more stringent than these presumptive emission guidelines in order to address concerns which are specific to a particular localized air quality situation. Moreover, States that believe additional control is necessary or desirable will be free under Section 116 of the CAA to require more extensive controls, which might have the effect of closing otherwise marginal facilities, or to ban particular categories of sources outright.

#### C. Emission Guidelines Decision Summary

Emission guidelines for existing sources are the product of a series of decisions related to certain key elements for the source category being considered for regulation. The elements in this "decision" are generally the following:

1. Identification of source category to be regulated—usually an emission source category, but can be a process or group of processes within an industry.
2. Definition of designated facility—the piece or pieces of equipment that comprise the sources to which the guidelines apply.
3. Selection of designated pollutant(s)—the particular substance(s) emitted by the designated facility that the new source performance standards (NSPS) and guidelines control.
4. Identification of "best demonstrated technology"—the technology on which the guidelines are based, i.e.,

... application of the best system of continuous emission reduction which (taking into consideration the cost of achieving such emission reduction, any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated for that source category. [Section 111(a)(1)(C).]

5. Selection of format for the guidelines—the form in which the guidelines are expressed, i.e., as a percent reduction in emissions, as emission limits, as pollutant concentrations, or as equipment or work practice guidelines.

6. Development of actual guidelines—generally emission limits based on what "best demonstrated technology" can achieve. Only in unusual cases do guidelines require that a specific technology be used. In general, the

source owner or operator may select any method for complying with the guidelines.

7. Other considerations—in addition to emission limits, emission guidelines usually include: guidelines for visible emissions, modification/reconstruction provisions, monitoring requirements, performance test methods and compliance procedures, and reporting and recordkeeping requirements.

#### D. Overview of This Preamble

This preamble will:

1. Summarize the important features of these proposed guidelines by discussing the conclusions reached with respect to each of the elements in the decision summary.
2. Describe the environmental, energy, and economic impacts of these guidelines.
3. Present a rationale for each of the decisions in the decision summary.
4. Present a regulatory flexibility analysis.
5. Discuss administrative requirements relevant to this action.

#### II. Summary of the MWC Guidelines

##### A. Source Category To Be Regulated

The proposed guidelines would require States to develop standards of performance for the control of air pollutant emissions from existing municipal waste combustors (MWC's). An MWC is defined as any combustion facility used for burning municipal solid waste (MSW). The MSW burned in the MWC's is refuse, more than 50 percent of which is waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible materials such as glass, metal, and rock. The MSW definition includes household wastes as well as municipal-type wastes from institutional, commercial, municipal, and some industrial sources, but does not include industrial process wastes, or medical wastes. The MSW also includes refuse-derived fuel (RDF), which is solid waste that is shredded and classified by size before combustion.

##### B. Pollutants To Be Regulated

The pollutant to be regulated by the States under the proposed guidelines is "MWC emissions." Constituents of MWC emissions represent a broad range of pollutants that can generally be categorized into three subclasses: MWC organics (including dioxins/furans), MWC metals (including trace metals which are condensable on particulate matter [PM]), and MWC acid gases (sulfur dioxide [SO<sub>2</sub>] and hydrogen



chloride [HCl]). The composite pollutant "MWC emissions" is designated for regulation under section 111(d), which applies to existing sources (the subject of this notice), and under section 111(b),

which applies to new sources. New source performance standards (NSPS) proposed under section 111(b) are published in a separate notice in today's Federal Register. As shown in table 1,

the proposed guidelines establish limits and operating standards to control MWC emissions.

TABLE 1. SUMMARY OF REGULATED POLLUTANT AND GUIDELINES

Pollutant regulated	Pollutant subclasses	Proposed guidelines*
1. MWC Emissions ("designated" for control under Section 111).	MWC Organics.....	● Dioxin/furan emission level
		● Combustor operational guidelines: —CO Level —Load —Flue Gas Temperature —MWC Operator Training
	MWC Metals.....	● PM emission level
		● Opacity level
	MWC Acid Gases.....	● HCl emission level
		● SO <sub>2</sub> emission level

\* Materials separation guidelines are also proposed. These guidelines would result in additional reduction of MWC emissions.

### C. Best Demonstrated Technology

The proposed guidelines for MWC's located at small MWC plants (those plants that have an aggregate capacity to combust up to 225 megagrams/day [Mg/day] [250 tons/day] of MSW) are based on the conclusion that the best demonstrated technology for reducing MWC emissions includes: good combustion practices (GCP) for MWC organics control, and an electrostatic precipitator (ESP) for control of MWC metals and PM. This combination of controls can achieve the following emission levels (corrected to 7 percent oxygen [O<sub>2</sub>] on a dry basis):

1. MWC organics control: dioxin/furan control to 500 nanograms per normal cubic meter (ng/Nm<sup>3</sup>) (200 grains per billion dry standard cubic feet [gr/billion dscf]) total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

2. MWC metals control: PM control to 69 milligrams per dry standard cubic meter (mg/dscm) (0.030 grains per dry standard cubic foot [gr/dscf]).

The proposed guidelines for MWC's located at large MWC plants (those plants that have an aggregate capacity to combust greater than 225 Mg/day [250 tons/day] but less than or equal to 2,000 Mg/day [2,200 tons/day] of MSW) are based on the conclusion that the best demonstrated technology for reducing MWC emissions includes: GCP for MWC organics control and dry sorbent injection (DSI) followed by an ESP or a fabric filter (FF) to achieve additional control of MWC organics as well as MWC metals and PM, and MWC acid gases. This combination of controls can achieve the following emission levels (corrected to 7 percent O<sub>2</sub> on a dry basis):

1. MWC organics control: dioxin/furan control to 125 ng/Nm<sup>3</sup> (50 gr/billion dscf) total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans for all types of MWC's except RDF combustors. For RDF combustors, the dioxin/furan control level would be 250 ng/Nm<sup>3</sup> (100 gr/billion dscf);

2. MWC metals control: PM control to 69 mg/dscm (0.030 gr/dscf); and

3. MWC acid gas control including:  
a. HCl emissions reduction of 50 percent or an HCl emission level of 25 parts per million, by volume (ppmv), and  
b. SO<sub>2</sub> emissions reduction of 50 percent or an SO<sub>2</sub> emission level of 30 ppmv.

The proposed guidelines for MWC's that are located at regional MWC plants (those plants that have an aggregate capacity to combust greater than 2,000 Mg/day [2,200 tons/day] of MSW) are based on the conclusion that the best demonstrated technology for reducing MWC emissions includes: GCP for MWC organics control and a spray dryer (SD) followed by an FF to achieve additional control of MWC organics as well as MWC metals and PM, and MWC acid gas. This combination of controls can achieve the following emission levels (corrected to 7 percent O<sub>2</sub> on a dry basis):

1. MWC organics control: dioxin/furan control to a level in the range of 5 to 30 ng/Nm<sup>3</sup> (2 to 12 gr/billion dscf) total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans (the precise level within this range will be determined between proposal and promulgation);

2. MWC metals control: PM control to 34 mg/dscm (0.015 gr/dscf); and

3. MWC acid gas control:

(a) HCl emissions reduction of 95 percent or an HCl emission level of 25 ppmv, and

(b) SO<sub>2</sub> emissions reduction of 85 percent or an SO<sub>2</sub> emission level of 30 ppmv.

The EPA is also including materials separation provisions (i.e., separation of certain materials from MSW prior to combustion) in the proposed guidelines as part of best demonstrated technology. The proposed guidelines for materials separation would apply to all MWC's. The proposed guidelines would require MSW to be processed before combustion to achieve an overall 25 percent or greater reduction (by weight) through separating for recovery some or all of the following materials: paper and paperboard; ferrous metals; nonferrous metals; glass; plastics; household batteries; and yard waste. However, a maximum of 10 percent of the overall weight of reduction could be attributed to yard waste; the other 15 or more percent would come from the other separated materials. Additionally, the guidelines would preclude the combustion in MWC's of lead-acid vehicle batteries weighing more than 5 kg (11 lbs), and a program to remove household batteries prior to combustion would be required.

### D. Format For The Guidelines

Since it is not possible to establish and measure stack levels of "MWC emissions" as a whole, guidelines are set for a subset of pollutants that will ensure control of the three subclasses of MWC emissions (MWC organics, MWC metals, and MWC acid gases). The proposed guidelines for MWC emissions would control MWC organics by establishing an emission guideline for dioxins/furans. Emissions for dioxins/



furans would be calculated as a concentration ( $\text{ng}/\text{Nm}^3$  [ $\text{gr}/\text{billion dscf}$ ]) at 7 percent  $\text{O}_2$ . The proposed guidelines for MWC metals would establish an emission level for PM and an opacity level. Emissions for PM would be calculated as a concentration ( $\text{gr}/\text{dscf}$ ) at 7 percent  $\text{O}_2$ . Since MWC metals are associated with PM in the flue gas and are removed by PM control devices, achieving the specified levels of PM control would ensure 97 percent or greater control of the range of MWC metals (except mercury, for which a lower percent control would be achieved). This approach is more practical than setting guidelines for each individual metal. The opacity guideline allows continuous monitoring, since there are no systems for continuous monitoring of PM. The proposed guidelines for MWC acid gases ( $\text{SO}_2$  and  $\text{HCl}$ ) would establish both a percent reduction (by weight or volume) requirement and a concentration level. The MWC owner/operator may comply with either of these two methods for acid gas compliance. The concentration guideline for  $\text{HCl}$  and  $\text{SO}_2$  are calculated as ppmv (at 7 percent  $\text{O}_2$ ).

In addition to controlling stack emissions, the proposed guidelines would establish combustor operating guidelines for MWC's. These operating guidelines are part of GCP and would ensure that MWC organic (dioxin/furan) control is achieved on a continuous basis. They include guidelines on combustor exhaust carbon monoxide ( $\text{CO}$ ) level, maximum MWC load level, and flue gas temperature at the PM control device inlet.

The proposed guidelines also would require that States require the certification of the chief facility operator and shift supervisors by the American Society of Mechanical Engineers (ASME) and development of a training manual to be used for training other MWC personnel. Training is an integral part of the implementation of GCP.

The proposed guidelines would also require States to require that all existing MWC's incorporate materials separation procedures to process MSW prior to combustion. All MWC's would have to process MSW to achieve an overall 25 percent or greater reduction by weight (annual average) of MSW through separating for recovery some or all of the following materials: paper and paperboard; ferrous metals; nonferrous metals; glass; plastics; household batteries; and yard waste. In calculating the 25 percent overall weight reduction, a maximum credit of 10 percent would be allowed for yard waste separation. In addition, the guidelines would prohibit

the combustion of lead-acid vehicle batteries weighing more than 5 kilograms ( $\text{kg}$ ) (11 lbs), and all household batteries. The materials separation requirements could be achieved by mechanical separation or manual separation at the MWC site, or by an off-site community source reduction or materials separation (recycling) program, or a combination thereof.

#### *E. Proposed Guidelines*

The proposed guidelines are subdivided into three sets of requirements, one for MWC's located at small MWC plants (those with the aggregate capacity to combust up to 225  $\text{Mg}/\text{day}$  [250 tons/day] of MSW), one for MWC's located at large MWC plants (those with the aggregate capacity to combust greater than 225  $\text{Mg}/\text{day}$  [250 tons/day] but less than or equal to 2,000  $\text{Mg}/\text{day}$  [2,200 tons/day] of MSW), and one for MWC's located at regional MWC plants (those with the aggregate capacity to combust greater than 2,000  $\text{Mg}/\text{day}$  [2,200 tons/day] of MSW). The aggregate capacity of all existing MWC's at one site would be added together to define aggregate MWC plant capacity.

#### *MWC Emissions*

The proposed guidelines for control of each subclass of MWC emissions are summarized below. Stack guidelines are discussed first, followed by combustor operational guidelines.

**MWC Organics.**—The proposed guidelines for MWC organics would result in all MWC's at small MWC plants meeting a dioxin/furan emission level of 500  $\text{ng}/\text{Nm}^3$  (200  $\text{gr}/\text{billion dscf}$ ), except for RDF combustors. While it is unlikely that RDF combustors would be constructed at small MWC plants, they would have a dioxin/furan guideline level of 1,000  $\text{ng}/\text{Nm}^3$  (400  $\text{gr}/\text{billion dscf}$ ).

At large MWC plants, the guideline would result in all MWC's meeting a dioxin/furan level of 125  $\text{ng}/\text{Nm}^3$  (50  $\text{gr}/\text{billion dscf}$ ), except for RDF combustors; RDF combustors at large MWC plants would have a guideline level of 250  $\text{ng}/\text{Nm}^3$  (100  $\text{gr}/\text{billion dscf}$ ).

At regional MWC plants, the guideline would result in all MWC's meeting a dioxin/furan level in the range of 5 to 30  $\text{ng}/\text{Nm}^3$  (2 to 12  $\text{gr}/\text{billion dscf}$ ) (at 7 percent  $\text{O}_2$ ). The precise level within this range will be determined between proposal and promulgation. These guideline levels apply to total tetra-through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

**MWC Metals.**—The proposed guidelines for MWC metals would result

in all MWC's located at small and large MWC plants meeting a PM emission level of 69  $\text{mg}/\text{dscm}$  (0.030  $\text{gr}/\text{dscf}$ ). All MWC's at regional MWC plants would meet a PM emission level of 34  $\text{mg}/\text{dscm}$  (0.015  $\text{gr}/\text{dscf}$ ) at 7 percent  $\text{O}_2$ . These PM guideline levels would ensure good control of MWC metals, and are a more practical approach than setting individual guideline levels for every metal. The guidelines would also result in MWC's being subject to an opacity level of 10 percent (6-minute average, measured continuously).

**MWC Acid Gases.**—The proposed guidelines would not specify acid gas emission levels or percent reduction levels for MWC's located at small MWC plants.

The proposed guidelines for MWC acid gases would result in all existing MWC's at large MWC plants achieving  $\text{HCl}$  and  $\text{SO}_2$  emission reductions. A 50 percent reduction in  $\text{HCl}$  emissions or a 25 ppmv  $\text{HCl}$  emission level measured during a compliance test and annual performance tests would be achieved at large plants. All existing MWC's at large MWC plants would also achieve a 50 percent reduction in  $\text{SO}_2$  emissions or a 30 ppmv  $\text{SO}_2$  emission level (measured on a daily (block) 24-hour average basis, measured continuously).

The proposed acid gas guidelines for MWC's at regional MWC plants would result in a 95 percent reduction in  $\text{HCl}$  emissions or a 25 ppmv  $\text{HCl}$  emission limit measured during a compliance test and annual performance tests. Those MWC's at regional MWC plants would also achieve an 85 percent reduction in  $\text{SO}_2$  emissions or a 30 ppmv  $\text{SO}_2$  emissions level on a daily (block) 24-hour average basis, measured continuously.

**Combustion Control.**—The guidelines would also specify MWC operating parameters, which are part of GCP and would ensure that MWC organic emissions are minimized on a continuous basis. These operating parameters would include  $\text{CO}$  emission limits, combustor load levels, and flue gas temperatures at the PM control device inlet.

For modular starved air and modular excess air types of MWC's, the  $\text{CO}$  emission guideline would be 50 ppmv (at 7 percent  $\text{O}_2$  on a block 4-hour average basis). For mass burn waterwall, mass burn refractory, and fluidized-bed types of MWC's, the  $\text{CO}$  emission guideline would be 100 ppmv (at 7 percent  $\text{O}_2$  on a 4-hour block average basis). For mass burn rotary waterwall, RDF, and coal/RDF co-fired MWC's, the  $\text{CO}$  emission guideline would be 150 ppmv (at 7



percent O<sub>2</sub> on a 4-hour block average basis).

The guidelines would preclude MWC's operating above 100 percent of maximum demonstrated capacity as measured during a compliance test (1-hour average basis). Municipal waste combustor load would be measured by steam output level. Municipal waste combustors that do not generate steam are exempt from maximum load level requirements because it is not feasible to measure load level for these MWC's.

Under the proposed guidelines, all MWC's would maintain a flue gas temperature of 230 °C (450 °F) or less (4-hour block average) at the PM control device inlet to minimize dioxin/furan formation.

**ASME Certification and Operator Training.**—As part of GCP, the proposed guidelines would result in certification of the shift supervisor and MWC chief facility operator by ASME. In addition, under the proposed guidelines each MWC owner or operator would develop a site-specific training manual to be reviewed by all employees associated with the operation of the MWC. The manual and training would be updated annually.

#### Materials Separation

Under the proposed guidelines, all existing MWC's would incorporate materials separation procedures to process MSW prior to combustion. All MWC's would process MSW to achieve a 25 percent or greater reduction in MSW by weight (annual average) through separation for recovery of some or all of the following materials: paper and paperboard; ferrous metals (including "white goods," or household appliances), nonferrous metals; glass; plastics; household batteries; and yard waste. In calculating the 25 percent weight reduction, a maximum credit of 10 percent would be allowed for yard waste separation. In addition, all MWC's would be prohibited from combusting wet lead-acid vehicle batteries weighing more than 5 kilograms (kg) (11 lbs), and a program to remove household batteries prior to combustion would be required. The materials separation requirements could be achieved by on-site mechanical separation, on-site manual separation, a community source reduction or materials separation (recycling) program, or a combination thereof. Under the proposed guidelines, materials separation systems or programs capable of achieving the materials separation requirements would be implemented by December 31, 1992.

#### F. Performance Testing and Monitoring Guidelines

##### MWC Emissions

Performance testing and monitoring guidelines are being proposed under the guidelines to ensure control of each subclass of MWC emissions. All guideline emission levels are corrected to 7 percent O<sub>2</sub> on a dry basis. However, an MWC owner or operator may request to correct to an equivalent percent CO<sub>2</sub>. In these cases, the correlation between O<sub>2</sub> and CO<sub>2</sub> would be established during the compliance test.

**MWC Organic Emissions.**—The proposed MWC organic emissions guidelines would result in a requirement for performance tests to be conducted in accordance with Method 23 to determine compliance with the dioxin/furan emission limit. Method 23 is proposed today in a separate section of this *Federal Register*. Annual retests would be required by the guidelines for all MWC's. However, if three performance tests in a row indicate compliance with the dioxin/furan emission limit, the guidelines would allow an MWC to skip the annual performance test for the next 2 years. If the next test (after skipping 2 years) shows compliance with the limits, another 2-year period may be skipped. At a minimum, each MWC would be tested at least once every 3 years.

**MWC Metals.**—Performance tests to determine compliance with the PM emission guidelines (which ensure metals control) would be based on Method 5. Method 1 would be used for selecting the sampling points, and Method 3 would be used for gas analysis. Method 9 (a 6-minute average of 24 observations) would be used to determine compliance with the opacity guideline. Subsequent annual performance tests would be required for all MWC's. However, as with dioxin/furan emissions, if three performance tests in a row indicate compliance with the PM limit, the guideline would allow an MWC to skip the annual performance test for the next 2 years. At a minimum, each MWC would be tested every 3 years.

**MWC Acid Gases.**—The proposed MWC acid gas guidelines would result in continuous monitoring of SO<sub>2</sub> emissions for existing MWC's at large and regional MWC plants. Compliance with the percent reduction requirement or the emission limit would be determined on a daily (block) 24-hour basis as measured by the continuous emissions monitoring system (CEMS). Quality assurance for the CEMS would be conducted in accordance with Appendix F.

Compliance with the proposed MWC acid gas guidelines for HCl would be determined by HCl performance tests to be conducted in accordance with Method 26 to determine compliance with the HCl percent reduction requirements or emission limits. Method 26 is proposed in a separate notice in today's *Federal Register*. Subsequent annual performance tests would be required for existing MWC's at large and regional MWC plants. However, if three performance tests in a row indicate compliance with the HCl percent reduction requirement or emission limit, an MWC may skip the annual performance test for the next 2 years. At a minimum, each MWC at a large or regional MWC plant must be tested every 3 years.

**Operating Guidelines.**—Continuous monitoring of certain operating parameters would ensure that GCP are implemented on a continuous basis. These parameters are flue gas CO level, MWC load level, and flue gas temperature at the PM control device inlet. Compliance with the CO guideline would be determined on a block 4-hour average basis as measured by a CEMS. Calculations to determine compliance would be made in accordance with Method 10. Quality assurance would be maintained in accordance with Appendix F. Load level (percent of full load) would be measured using steam flowrate, and a 1-hour average used to determine compliance. Compliance with the temperature guideline would be determined through continuous monitoring and a 4-hour averaging period.

**Requirements for CEMS.**—A minimum data requirement applicable to all CEMS is also proposed as part of the guideline. Data would have to be collected for a minimum of 75 percent of the MWC operating hours per day for 75 percent of the operating days per month.

#### Materials Separation

The proposed guidelines provide that all existing MWC's would submit a description of procedures for achieving: (1) The 25 percent overall separation requirement, (2) the lead-acid vehicle battery removal requirement, and (3) the household battery removal requirement. If an off-site or community program is used to comply in whole or in part with the requirements, a plan describing the separation program and the method(s) to be used to measure compliance would be submitted to the State agency for approval.

Compliance with the provision for the 25 percent overall MSW reduction would be determined annually.



Compliance would be based on an average of 12 monthly measurements of the total weight of MSW received, the weight of MSW combusted, and the weight of materials separated for recovery during each month. The first report of the annual percent reduction achieved would be required at the end of calendar year 1993, but this report would not be used to determine compliance. Demonstration of compliance with the annual average percent MSW reduction would not be required until December 31, 1994 (which is the end of the second calendar year after implementation of the separation systems or programs). Annual average calculations would be required for each calendar year thereafter.

Separation procedures could include mechanical separation, manual sorting, or curbside separation programs. If an off-site source reduction or materials separation (recycling) program is used to meet the materials separation requirements, the MWC and the party responsible for off-site separation may enter into a contractual relationship. The contractual relationship could designate the MWC and the off-site separator as co-operators of the MWC regarding compliance with the materials separation requirements. The contract could also specify the responsibilities of each party and the actions the off-site separator will take to meet the requirements for the 25 percent MSW reduction and/or removal of vehicle batteries and/or household batteries, as applicable.

The proposed materials separation requirements would also include a combustion permit provision that would be renewable on an annual basis. The permit would be available for MWC's that separate combustible material (e.g., paper, plastics) for recycle but for which there are no markets for the separated material. When a permit had been issued, the separated material could be combusted in the MWC.

#### *G. Reporting and Recordkeeping Guidelines*

Under the proposed guidelines, all MWC owners or operators would submit the results of the initial performance test and performance evaluation of the CEMS.

The proposed guidelines also provide for quarterly reports of CEMS drift tests and accuracy determinations in accordance with Appendix F, and reports of any periods when the minimum data requirements for CEMS are not met.

Records of all data, including results of emission tests and CEMS data, must be maintained for 2 years and made

available to enforcement personnel upon request.

#### *MWC Emissions*

Under the proposed guidelines, all MWC's would submit quarterly compliance reports for MWC operating parameters (CO, load, and temperature). Quarterly excess emission reports would be submitted for opacity for all MWC's, and MWC's at large and regional MWC plants would submit quarterly compliance reports for SO<sub>2</sub>. Annual compliance reports for dioxin/furan and PM would be submitted for all MWC's, and annual compliance reports for HCl would also be submitted for MWC's at large and regional MWC plants. However, if MWC's have met the criteria allowing them to skip annual compliance tests for dioxin/furan, PM, or HCl, they would submit a simplified annual report.

#### *Materials Separation*

Annual compliance reports for materials separation would be submitted under the proposed guidelines. The first report would be submitted at the end of calendar year 1993 (which is 1 year after separation programs are to be implemented), however, this report would not be used to determine compliance. This interim report would be used to observe progress made toward the materials separation requirements. Reports submitted beginning at the end of calendar year 1994 would be used to determine compliance. Records of the weight of MSW received at the MWC, the weight combusted, and the weights of each material separated for recovery (on a monthly basis) would be kept. Additionally, records would be maintained of the weight of vehicle batteries and household batteries removed.

#### *H. Compliance Times*

The proposed emission guidelines would stipulate that existing MWC's should achieve compliance with the guidelines within 3 years from the time of promulgation of State regulations. Some MWC's may already be in compliance with the guidelines and not require 3 years to comply, but in most cases 3 years is expected to be required. However, in some cases, compliance times beyond 3 years may be necessary according to the extent of retrofitting that an MWC requires. State plans could address this issue on a site-specific basis. The proposed guidelines include a different compliance time for materials separation. Equipment and procedures capable of attaining the materials separation provisions would be in place

by December 31, 1992. However, the initial demonstration of compliance with the materials separation provisions (annual average basis) would not occur until the end of calendar year 1994.

### *III. Impacts of the Guidelines*

#### *A. Air*

##### *MWC Emissions*

Under the proposed guidelines, nationwide emissions of dioxins/furans would be decreased by about 190 kilograms/year (kg/year) (420 lbs/year) compared with emission levels under the regulatory baseline. This represents a reduction of over 90 percent. Nationwide emissions of particulate matter (PM) would be decreased by about 8,300 Mg/year (9,100 tons/year) compared with emission levels under the regulatory baseline. Under the proposed guidelines, overall municipal waste combustor (MWC) metal emission reductions of about 97 percent for all metals except mercury would be achieved by the air pollution control systems. Nationwide emissions of sulfur dioxide (SO<sub>2</sub>) and hydrogen chloride (HCl) would be decreased by about 37,000 Mg/year (41,000 tons/year) and 86,000 Mg/year (95,000 tons/year), respectively. This represents a reduction of over 50 percent in acid gas emissions.

##### *Materials Separation*

The proposal for materials separation would reduce the overall amount of waste combusted by about 25 percent and would reduce overall MWC emissions; however, the amount of emissions reduction cannot be predicted accurately since limited data exist relating materials separation to MWC emissions when materials separation occurs in conjunction with at-the-stack air pollution control devices. Additional reductions in emissions of MWC organics, MWC metals and mercury, and MWC acid gases are expected.

#### *B. Water and Solid Waste*

##### *MWC Emissions*

Under the proposed guidelines, no significant water pollution impacts are projected because none of the emission control technologies that were considered in developing these guidelines would produce a wastewater stream.

No significant solid waste impacts are projected from these proposed guidelines. Requirements for good combustion practices (GCP) tend to reduce the quantity of ash generated by MWC's, whereas addition of acid gas control slightly increases the quantity of ash generated due to addition of sorbent



solids. Overall, the proposed guidelines would increase the net amount of MWC ash generated by roughly 3 percent or 250,000 Mg/year (280,000 tons/year) relative to baseline. However, the combustion of municipal solid waste (MSW) as opposed to direct landfilling reduces the volume of waste to be disposed of in landfills (by about 90 percent) and extends landfill life. Even with the increased ash, combustion would still reduce the volume of waste by about 90 percent.

It is unclear what, if any, effect acid gas control would have on ash quality. However, increased scrutiny and control over waste disposal in municipal waste landfills should result in environmentally adequate ash disposal practices. The EPA is required, under the Resource Conservation and Recovery Act (RCRA) section 4010(c), to develop criteria for sanitary landfills that receive household hazardous waste and small quantity generated hazardous waste, which criteria are to protect human health and the environment taking into account the practicable capability of such facilities. These criteria may ultimately be Federally enforceable if States do not adopt adequate programs to implement them. RCRA section 4005(c). The EPA has proposed criteria for all MSW landfills pursuant to these provisions. These criteria would require such controls as groundwater monitoring, closure, financial responsibility, and corrective action standards for existing MSW landfills, and require in addition risk-based performance standards for new landfills or lateral expansions of existing MSW landfills. 53 FR 33314 (August 30, 1988). Pending legislation, although at an early stage of the legislative process, would require even more stringent controls, and in some bills, a whole separate regulatory system for MWC ash. The EPA thus believes that ash disposal will ultimately be adequately addressed by waste disposal management standards so that considerations of ash quality need not play a significant role in this rulemaking. However, to the extent that future EPA or Congressional action increases the stringency of controls and thereby cost of MWC ash disposal, the increased cost of ash disposal will be considered as part of this rulemaking. The EPA solicits comment regarding the effect of potential future MWC ash disposal standards on this rule.

#### Materials Separation

The proposed materials separation guidelines would encourage source reduction and recycling of materials, thereby reducing the volume of solid

waste and ash to be disposed of in MWC's or landfills. Any national strategy adopted by Congress and implemented at the State and local level would be credited toward the material separation requirement in this guideline.

#### C. Energy

##### MWC Emissions

An MWC regulated under the proposed guidelines would require additional energy to operate the control equipment used to comply with the proposed guidelines. Total national usage of electrical energy would increase by about 73,000 megawatt hours per year (MW-hrs/year), and natural gas use for auxiliary fuel would increase by 810 terajoules (TJ) ( $7.7 \times 10^{11}$  Btu) per year. Many of the MWC's that would be affected are cogeneration MWC's that combust MSW and produce steam that is used to generate electricity for sale. For example, a large mass burn MWC would generate about 410,000 MW-hrs per year of electricity. Although these MWC's would require additional energy to operate control equipment, the additional energy would only be about 11,000 MW-hrs of electricity per year at a typical large MWC, which has a very small overall impact on energy generated at the plant (a net reduction in energy generation of 2.6 percent). No other energy impacts would be associated with these proposed guidelines.

##### Materials Separation

A small additional amount of energy would be used if mechanical materials separation procedures are practiced at the MWC plant. However, on a national basis, positive energy benefits are expected as a result of the materials separation requirements. The recycling of separated materials reduces overall energy use since the combined extraction and development of equivalent virgin raw materials is relatively energy-intensive.

#### D. Control Costs

The total annualized cost of control would be about \$320 million/year, and the overall national average annualized cost per unit of waste combusted would be \$10.90/Mg (\$9.90/ton) of MSW combusted. This includes the cost of control for MWC emissions and materials separation. For perspective, typical costs incurred by the general public for disposal of MSW range from \$40 to over \$100/Mg (\$36 to over \$90/ton) of MSW, including collection, transportation, combustion, and ash disposal.

Cost increases for typical large and regional MWC plants would range from about \$4 to \$15/Mg (\$4 to \$14/ton) of MSW combusted. Cost increases for typical small MWC plants would range from a negligible cost to about \$19/Mg (negligible to about \$17/ton) of MSW combusted.

The portion of the national cost and model plant impacts attributable to each of the guidelines is summarized below.

##### MWC Emissions

As a result of implementing the guidelines for MWC emissions, the overall average projected increase in nationwide annualized costs for controlling MWC emissions (using GCP and acid gas/PM control) is projected to be about \$10.90/Mg (\$9.90/ton) of MSW combusted. The nationwide projected increase in capital costs for controlling MWC emissions would be about \$1.2 billion.

On a per plant basis, the annual disposal cost for a typical large or regional MWC would increase by between \$4 and \$15/Mg (\$4 and \$14/ton) of MSW combusted, depending on the size and design of the MWC. Under the guidelines, the annual disposal cost for a typical small MWC would increase by between a negligible cost and \$19/Mg (negligible and \$17/ton) of MSW combusted, depending on the size and design of the MWC.

##### Materials Separation

Over the long term, the proposed guidelines for materials separation are not expected to result in an increase in national annualized costs. While some costs will be initially incurred to purchase and operate materials separation systems, as markets develop and stabilize, these costs will be offset by credits for sale of separated materials, reduced landfill disposal costs (due to reduced amount of MWC ash generated and disposed of in landfills), and other monetary benefits described in section V.

Annualized disposal cost increases or decreases for materials separation could occur at individual plants depending on material sales assumptions. At typical existing MWC's, materials separation costs could vary from a cost of about \$17/Mg (\$15/ton) of MSW combusted to a net savings of about \$19/Mg (\$17/ton) of MSW combusted when markets for separated materials develop and the materials are sold.

#### E. Economic Effects

##### MWC Emissions

The economic effects of the proposed guidelines on individual households are



not projected to be severe. Under the proposed guidelines, over 90 percent of the MWC service areas examined are projected to have household impacts of less than \$30/year and less than 0.15 percent of median household income. Likewise, the increase in waste disposal costs from the proposed guidelines would not result in severe economic impacts on any city or county government units.

#### Materials Separation

The costs of materials separation, when added to the cost of the other MWC emissions controls, would not cause severe impacts on households or government units. Costs may increase slightly in the short term in some instances where local markets for separated materials are not yet well developed. Also, households will experience some inconvenience in those areas which adopt a curbside separation program. However, as markets develop and stabilize, EPA believes the sale of materials for recovery will offset MSW disposal costs for households and government units. In general, materials separation guidelines and other Agency programs to encourage reuse will reduce the amount of MSW that must be disposed of, thereby reducing the overall costs of MSW disposal.

#### IV. Rationale for the Guidelines for MWC Emissions

##### A. Background

The regulatory interest in municipal waste combustors (MWC's) can be traced to the 1971 new source performance standard (NSPS) for particulate matter (PM) emissions from new municipal incinerators larger than 50 tons/day capacity under Section 111(b) of the Clean Air Act (CAA) (40 CFR part 60 subpart E). Similarly, in 1986 a PM standard was promulgated for new industrial-commercial-institutional steam generating units larger than 29 MW (100 million Btu/hour) heat input capacity combusting a number of fuels including municipal solid waste (MSW) (40 CFR part 60 subpart Db). The 1986 PM standard was more restrictive than the 1971 standard. New MWC's that are equipped with steam generating units and process roughly 225 Mg/day (250 tons/day) or more of municipal waste per MWC (which is approximately equivalent to 100 million Btu/hour) are subject to the 1986 NSPS. The Subpart E and Db standards for new MWC's, however, were developed to control emissions of PM and do not address control of toxic organics or health concerns specific to

toxic organics or other components of MWC emissions.

In section 102 of the 1984 Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA), Congress directed EPA to prepare a report on the magnitude of dioxin risks from MWC's and to identify ways in which dioxin emissions could be minimized. In addition, during 1984 and 1985, the EPA's Office of Air and Radiation (OAR), in the course of assessing candidate air toxics, identified MWC's as a potential source category of concern. In June 1985, the Administrator announced the National Air Toxics Strategy, which included the commitment to regulate source categories of widespread national concern and give high priority to those that emit multiple pollutants such as MWC's. In addition to the above-mentioned regulatory activities, on August 5, 1986, the Natural Resources Defense Council (NRDC) and the States of New York, Rhode Island, and Connecticut petitioned the Administrator of EPA to regulate air emissions from new and existing MWC's under sections 111 and 112 of the CAA.

In response to the Congressional directive and as part of the OAR's air programs, EPA prepared a Report to Congress that was issued in June 1987. This nine-volume report presented a compilation of the available information on MWC's including industry characteristics, emission data, health risks, control technologies, and costs of control. It provided the technical basis for the decision to regulate air emissions from MWC's.

On July 7, 1987, an advanced notice of proposed rulemaking (ANPRM) was published in the Federal Register (52 FR 25339) where EPA announced its preliminary determination to regulate new and existing MWC's under sections 111(b) and 111(d) of the CAA, respectively. The schedule announced in the Federal Register for these actions called for proposal of NSPS for new MWC's and issuance of draft 111(d) emission guidelines for existing MWC's by November 1989 and promulgation by December 1990. The Administrator determined that MWC's would be regulated under sections 111(b) and 111(d) because: (1) MWC emissions may reasonably be anticipated to contribute to the endangerment of public health and welfare, (2) the range of health and welfare effects and the range and uncertainties of estimated cancer risks do not warrant listing of MWC emissions as a hazardous air pollutant

under section 112, (3) section 112 could not be used to address particular constituents or subgroups of emissions including lead and hydrogen chloride (HCl), and (4) the development of emission guidelines for existing MWC's under section 111(d) would permit a more thorough evaluation of existing MWC's at the State level than would be feasible in a general rulemaking at the Federal level. (Under section 111(d), States develop standards based on the EPA guidelines.) Some States already have adopted or are developing their own MWC regulations.

An Agency MSW Task Force was formed in 1988 to address the full range of problems associated with MSW. Today's air emission guidelines are only one component of the plan developed by the MSW Task Force, entitled "The Solid Waste Dilemma: An Agenda for Action" (EPA/530-SW-88-052). Other ongoing and planned activities include regulations for new and existing MSW landfills proposed under RCRA, Subtitle D (53 FR 33314, August 30, 1988). Standards to control air emissions from municipal landfills are currently being developed. In addition, as stated in the "Agenda for Action," EPA encourages the use of recycling programs and source reduction activities to reach the goal of achieving a nationwide waste reduction of 25 percent by 1992. The Agency has also encouraged the development of State and local planning strategies to manage rates.

Today's proposal would apply to all facilities that combust municipal-type solid wastes or mixtures containing municipal-type solid wastes. Certain types of waste incinerators would not be covered by the guidelines for MWC's because they do not combust MSW. These other types of incinerators are regulated elsewhere. For example, hazardous wastes such as industrial sludges and chemical wastes are not covered under these guidelines for MWC's. However, hazardous waste incineration is regulated under RCRA authority (40 CFR 264 and 265 subpart 0). The incineration of sewage sludge is regulated by an NSPS (40 CFR 60 subpart 0) and also by regulations being developed under the Clean Water Act (40 CFR 503 subchapter 0). Medical waste incineration or incineration of infectious wastes from hospitals are not covered by today's proposal, but are being investigated for regulation under a separate standard.

##### B. Selection of Source Category

As mentioned above, PM emissions from new MWC's constructed after 1971 and 1986, respectively, are presently



regulated under subparts E and Db of 40 CFR 60. In addition, new source review (NSR) and prevention of significant deterioration (PSD) permits for new MWC's are subject to EPA operational guidance. However, because of the increasing trend toward combustion of MSW in the U.S., the large existing population of MWC's, the complex mixture of MWC emissions, and potential public health impacts, a more comprehensive approach to MWC's is necessary. Greater emphasis is being placed on controlling the entire range of emissions from MWC's and on controlling existing as well as new MWC's. This new approach has been adopted for several reasons.

A large amount of MSW is currently combusted by existing MWC's, and additional capacity will be added in the future due to increasing restrictions and limited availability for landfilling. At present, there are over 200 existing MWC plants (over 450 individual MWC's) with a total existing MWC capacity of about 95,000 Mg/day (100,000 tons/day) that would be subject to the emission guidelines.

On a national basis, MWC's would remain a major source of emissions if not adequately controlled. Without the guidelines proposed today, emissions of all pollutants from existing MWC's are approximately 230,000 Mg/year (260,000 tons/year). These emissions include 11,000 Mg/year (12,000 tons/year) of PM, 194,000 Mg/year (210,000 tons/year) of MWC acid gases [sulfur dioxide (SO<sub>2</sub>) and HCl combined], and 26,000 Mg/year (29,000 tons/year) of carbon monoxide (CO). In addition, existing MWC's would emit about 55,000 Mg/year (60,000 tons/year) of nitrogen oxide (NO<sub>x</sub>).

Existing MWC's are also significant sources of air pollution at the individual plant level. For example, in the absence of additional regulation, a typical 140 Mg/day (150 tons/day) modular starved-air MWC would emit about 78 g/year (0.17 lbs/year) of dioxins/furans, about 15 Mg/year (16 tons/year) of PM, about 180 Mg/year (200 tons/year) of MWC acid gases (SO<sub>2</sub> and HCl), and about 16 Mg/year (18 tons/year) of CO. A typical existing large mass burn MWC with a design capacity of 2,000 Mg/day (2,200 tons/day) would emit about 1,500 g/year (3.3 lbs/year) of dioxins/furans, about 130 Mg/year (150 tons/year) of PM, about 4,000 Mg/year (4,400 tons/year) of MWC acid gases (SO<sub>2</sub> and HCl), and about 170 Mg/year (190 tons/year) of CO.

Finally, due to their nature and magnitude, emissions from existing MWC's, if not adequately controlled, can pose health risks to the public. Both MWC organics and MWC metals

include carcinogens. Ranges of cancer risk estimates for MWC emissions were published in the 1987 ANPRM (52 FR 25339). A recent review of risks using data and information gathered to support development of NSPS found that cancer risks for MWC's are likely at the lower end of the earlier estimated ranges cited in the ANPRM, although there remain significant uncertainties in the risk assessment. Therefore, there is no reason to review the 1987 decision to regulate MWC's under section 111 of the CAA.

In addition to these cancer risks, HCl emissions are also of concern because short-term modeling using the actual reasonable worst-case plant approach showed that, in the absence of further regulation, ambient HCl exposures near some existing MWC plants may exceed the interim short-term health effects level for HCl. The interim long-term welfare effects (materials damage) ambient concentration level of 3.0 micrograms per cubic meter (ug/m<sup>3</sup>) (1.3 gr/million dscf) (annual average) may also be exceeded by some existing MWC plants.

For the above reasons, MWC's have been determined to be a major source of air pollution which may reasonably be anticipated to endanger public health and welfare. As a result, MWC's have been selected for regulation.

#### C. Modification or Reconstruction of Existing MWC's

Those MWC's for which construction, modification, or reconstruction commenced before today's date would be subject to the proposed guidelines, while those MWC's for which construction, modification, or reconstruction commenced on or after today's date would be affected by the Subpart Ea NSPS proposed elsewhere in today's Federal Register. "Construction" is defined by 40 CFR 60.2 to mean "fabrication, erection or installation of an designated facility." *Sierra Pacific Power Co. v. EPA*, 647 F.2d 60 (9th Cir. 1981). The designated facility for these emission guidelines is the MWC as defined in the proposed emission guidelines (Section 60.31a). "Commenced" is defined by 40 CFR 60.2 to mean "that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification." The phrase "contractual obligation" means a contractual obligation that cannot be cancelled without incurring significant liability.

*Potomac Electric Power Co. v. EPA*, 650 F.2d 509, 513-515 (4th Cir. 1981).

If an existing MWC is modified for the purpose of meeting the requirements of the proposed guidelines for existing MWC's or State regulations developed to implement these guidelines, then the MWC would not be considered "modified" or "reconstructed" and would not be subject to Subpart Ea. A special provision is being proposed in the MWC NSPS that would establish this waiver. However, if the existing facility is modified or reconstructed in ways not required to meet the emission guidelines, for example if MWC capacity is increased, then the MWC may be considered modified or reconstructed, and could become subject to subpart Ea.

In general, "modification" refers to "any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies \* \* \*" as described in the general NSPS provisions (40 CFR 60.14). "Reconstruction" generally includes "the replacement of components of an existing facility to such an extent that: (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new facility, and (2) it is technologically feasible to meet the applicable standards \* \* \*" (40 CFR 60.15), however, reconstruction is determined on a case-by-case basis. As mentioned above, where such an expenditure is required to meet the proposed emission guidelines, this would not be considered a modification or reconstruction, and the MWC will not be subject to subpart Ea.

#### D. Selection of Designated Pollutant

The collection of compounds emitted by MWC's, referred to as "MWC emissions", has been selected as the designated pollutant for regulation under sections 111(b) and 111(d) of the CAA. This approach was selected because of the large number of compounds emitted by MWC's that create potential health problems.

Emissions from MWC's are a complex mixture of numerous pollutants that affect public health. There are three general subclasses of pollutants within MWC emissions. These are MWC organics, MWC metals, and MWC acid gases. Organic emissions from MWC's, in particular dioxins/furans, are potentially carcinogenic. Emissions of MWC metals contain various metals that have carcinogenic and noncarcinogenic health impacts. The



great majority of MWC metal emissions are condensed on PM emissions. These include cadmium, chromium, lead, beryllium, and arsenic. Emissions of MWC acid gases (specifically HCl and SO<sub>2</sub>) pose several health and welfare-related problems. Of specific concern are emissions of HCl where short-term ambient exposure levels around some existing large MWC's may exceed short-term health effects levels. Also, long-term ambient concentrations may exceed welfare-effects levels for materials damage. Furthermore, MWC acid gases are precursors in the formation of acid deposition (acid rain), which adversely affects vegetation, surface water quality, and aquatic life. In combination, these effects support a health-based designation of MWC emissions under Section 111, although there are also welfare considerations.

The EPA has determined that it is unnecessary to measure MWC emissions as an entity and that it makes far more sense to develop guideline levels for certain component parts of MWC emissions. However, MWC emissions contain 100 or more components (many diverse metals and organics, for example). Although it is theoretically possible to measure all of these components, such a task would be extremely burdensome, expensive, and quite impractical. The guidelines EPA is proposing provide a high level of control of total MWC emissions, and do so in a way that avoids the administrative burden and expense associated with monitoring and measuring all components of MWC emissions.

#### E. Selection of Designated Facilities

For the proposed emission guidelines, the designated facility, an MWC, is defined as any combustion device used to burn MSW (including refuse-derived fuel (RDF)). The proposed guidelines would apply to incinerators (with and without heat recovery) and all types of MSW-fired steam generating units.

An MWC would be covered by this guideline if it burns MSW (including RDF) or a mixture of wastes or fuels containing MSW. The MSW is defined as refuse, more than 50 percent of which is municipal-type waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustibles, and noncombustible materials such as glass, metal, and rock. The MSW burned in the MWC's includes municipal-type waste from households as well as institutional, commercial, municipal, and industrial sources. These wastes can be characterized in a number of ways. Household wastes include municipal-type wastes generated by single and

multiple-family dwelling units (including garbage, trash, and yard wastes). Wastes from multiple-family units are usually collected in large containers and removed by commercial haulers. These wastes are also covered by today's guidelines. Institutional wastes include mixtures of municipal-type wastes generated by schools and colleges, and similar public buildings. Nonpathogenic wastes from medical institutions such as hospitals and nursing homes (e.g., wastes from their cafeterias and administrative offices) are also covered by these guidelines. Commercial MSW includes municipal-type waste mixtures generated by retail stores, shopping centers, office buildings, restaurants, hotels, airports, wholesalers, and other commercial establishments. The guidelines also cover municipal-type wastes generated by municipal public works or industries—such as mixtures containing corrugated boxes and other packing materials, tree and brush trimmings, cafeteria wastes, and paper towels. These guidelines do not cover any hazardous or nonhazardous industrial process wastes. They also do not cover infectious hospital wastes. It should be noted that MSW can be mixed with and combusted with sewage sludge from publicly-owned treatment works, and such combustion would be covered by the proposed guidelines. However, combustion of sewage sludge alone would not be covered.

Municipal solid waste also includes RDF. To produce RDF, the solid waste is shredded and classified by size prior to combustion.

As noted in the preceding paragraph, a source burning any amount of MSW would be classified as an MWC for purposes of these guidelines, and would consequently have to meet the State standards for MWC's which result from the promulgation of these guidelines. If a unit were classified under more than one set of standards (for example, a boiler burning MSW which also burns fossil fuel), it would have to meet both State and federal standards, and the more stringent standard in the event of an overlap. The EPA believes this is appropriate given that the source has chosen to burn MSW and therefore should have to meet the demonstrated standards for burning that material. The EPA realizes, however, that this reading would discourage burning of small amounts of MSW in units other than dedicated MWC's, and solicits comments on whether this is a desirable result. Commenters advocating some type of *de minimis* feed exception in the MSW definition should justify their choice of the cutoff.

The proposed emission guidelines are subdivided into three sets of requirements, one for MWC's located at small MWC plants with aggregate capacities to combust up to 225 Mg/day (250 tons/day) of MSW, one for MWC's located at large MWC plants with aggregate capacities to combust greater than 225 Mg/day (250 tons/day) but less than or equal to 2,000 Mg/day (2,200 tons/day) of MSW, and one for MWC's at regional MWC plants with aggregate capacities to combust greater than 2,000 Mg/day (2,200 tons/day) of MSW. For purposes of determining the regulatory size category of an existing MWC plant, the capacity of all existing MWC's at the same location would be aggregated (i.e., added together). Municipal waste combustor capacity is defined as the maximum demonstrated charging rate for each MWC, as measured in Mg/day (tons/day) of MSW combusted. Only existing MWC's that commenced construction prior to today's date would be considered in determining existing MWC capacity. Any MWC's that commenced construction on or after today's date would not be considered in existing MWC capacity calculations, but would instead be subject to the proposed MSWS under section 111(b) of the Act.

As mentioned above, the proposed capacity aggregation provision under the guidelines would apply to all existing MWC's that have been constructed at the same location. For the purpose of these proposed guidelines, "same location" refers to the same or contiguous property that is under common ownership or control. Properties are considered contiguous if they are directly adjoining or are separated only by a street, road, highway, or other public right-of-way. Properties are considered under the same ownership or control if owned or operated by the same entity, a parent entity, a subsidiary, or subdivision, or any combination. Included are properties owned or leased by a business, government, or quasi-governmental entity (e.g., a public utility district or regional waste disposal authority).

The proposed capacity aggregation provision is necessary because of the common practice within the MWC industry of constructing multiple MWC's at the same location. This aggregation ensures that similar MWC plants with similar emission potential are subject to the same emission guidelines regardless of the number of individual MWC's at the plants. Because multiple MWC's can have the same emission quality impacts as a larger single MWC, it is reasonable



to apply the proposed emission guidelines to all existing MWC's at the same location, regardless of the exact timing of their construction. However, as noted above, new MWC's (i.e., those not covered under the guideline) would be subject to separate proposed standards under section 111(b) of the CAA published elsewhere in today's Federal Register.

As discussed in section IV.C., changes and additions made to existing MWC's for the purposes of complying with today's proposed guidelines would not be considered "modifications" or "reconstructions," and these MWC's would remain subject to the guidelines rather than to Subpart Ea.

#### *F. Selection of Best Demonstrated Technology*

##### **Types of Combustors**

There are three main types of technologies that can be used to combust MSW: mass burn, modular, and RDF. In addition, less prevalent unique designs are found at a few existing MWC plants. Although these are the main types of MWC technologies, there are variations within these categories, and there are designs that incorporate features of more than one type.

Mass burn MWC's are field-erected units covering a wide size range with individual MWC's ranging in size from 45 to 900 Mg/day (50 to 1,000 tons/day) of MSW combusted. There are typically two or three MWC's per plant, and MWC plant capacities range from about 90 to 2,700 Mg/day (100 to 3,000 tons/day) of MSW. The technology is called mass burn because the waste is combusted without any preprocessing other than removal of items too large to go through the feed system. Typical mass burn MWC's use hydraulic rams or pusher grate sections to push the refuse from the fuel chute onto the grate. Additional grates or rams are used to move the waste through the MWC and to promote complete combustion by agitation of the thick fuel bed. Many of the more recently constructed mass burn MWC's are constructed of waterwalls, which is a method used for cooling the combustion chamber and recovering heat. Some of the older mass burn MWC's are refractory wall MWC's which do not have heat recovery capability.

Modular MWC's also burn waste without preprocessing, but are usually shop-fabricated, small MWC's ranging in size from 5 to 110 Mg/day (5 to 120 tons/day) of MSW. Plants typically have one to four MWC's (although a few have more), and plant capacities typically

range from about 14 to 360 Mg/day (15 to 400 tons/day) of MSW.

To allow shop fabrication size restrictions while also providing sufficient flue gas residence time to complete combustion, modular MWC's employ two or more combustion chambers. Depending on the design, combustion air is supplied to the primary chamber either in excess of the stoichiometric amount required for complete combustion (modular excess-air MWC) or at substoichiometric levels (modular starved-air MWC). In the excess-air designs, excess air (above stoichiometric levels) is introduced into the primary chamber. Additional air needed to promote mixing and complete burnout may be added in the secondary chamber. In this design, the secondary chamber provides additional residence time for mixing and for completing of combustion. This is functionally similar to larger mass burn MWC's. In the starved-air designs, sufficient air is supplied to the primary combustion chamber to volatilize combustible materials in the waste while minimizing entrainment of fuel particles and ash in the flue gas. The incomplete combustion products and particulates then pass into the secondary combustion chamber where additional air is added to complete combustion. Most modular MWC's have refractory-lined combustion chambers. Although many of the more recently constructed modular MWC's recover heat with waste heat boilers, some of the older and smaller existing modular MWC's do not have heat recovery.

The third class of MWC burns pretreated and shredded municipal waste, broadly referred to as RDF. The degree of processing used in RDF production can vary from simple removal of bulky items accompanied by shredding of the remaining waste to extensive pretreatment to produce a finely divided fuel containing relatively little noncombustible material. The RDF is generally fed with a stoker onto a moving grate. Some RDF MWC's are designed to combust only RDF, while others combust a mixture of RDF and other fuels such as wood or coal. In addition, a few boilers initially designed to combust pulverized coal may add some RDF as a supplemental fuel. Most RDF MWC's are medium to large sized MWC's with individual MWC's ranging in size from 270 to 900 Mg/day (300 to 1,000 tons/day) capacity. Plants typically have two to four MWC's, and RDF plant sizes range from 550 to 3,600 Mg/day (600 to 4,000 tons/day) capacity. In general, RDF MWC's are constructed

of waterwalls and employ heat recovery.

The last class of MWC's is comprised of various unique MWC designs that are found only at existing plants. For example, there are eight batch-fed refractory wall MWC's of various types currently in operation. However, these MWC's are generally 15 to 20 years old and no new ones are being built. Another unique design, the refractory kiln MWC, consists of a rotary kiln only, with no grate sections. This MWC is equipped with a waste heat boiler. However, only one of these MWC's is known to exist. There are also three plants with fluidized-bed MWC's.

#### *Emission Control Technologies for MWC Emissions*

There are basically three methods to controlling emissions from MWC's. The first method involves separation of materials prior to combustion, and exclusion of certain materials from combustion. Another method is to alter the combustion process to reduce emissions of MWC organics [referred to as good combustion practices (GCP)]. The third method is adding pollution control equipment after the MWC to control emissions of MWC metals and MWC acid gases, and to obtain additional MWC organics control. These control methods can be applied separately or in combination. The GCP and add-on methods are described in this section. Materials separation is described in section V of this preamble.

Good Combustion Practices: Good combustion practices include the proper design, construction, operation, and maintenance of an MWC. Municipal waste combustor emissions may originate from the feed waste or fuel, reactions occurring in the combustion chamber, or reactions on the surface of PM at temperatures from 250 to 400 °C (480 to 750 °F). The use of GCP reduces MWC organic emissions, including emissions of dioxins/furans and their precursors, by promoting more thorough combustion of these pollutants. Generally, newer existing MWC's have incorporated GCP features in their initial design, whereas older facilities may have to retrofit various components of GCP.

Important factors in MWC design and operation that reduce MWC organic emissions include: maintaining uniform waste feed rates and conditions; the use of pretreated air to combust wet or difficult to combust materials; maintaining adequate combustor temperature and residence time; providing proper total combustion (excess) air levels; supplying proper



amounts and distributions of primary (underfire) and secondary (overfire) air; minimizing PM carryover; monitoring degree of waste burnout; and the use of auxiliary fuel during startup and shutdown.

Carbon monoxide concentration in the combustor flue gas is a good indicator of combustion efficiency, and high MWC organic (i.e., dioxin/furan) emissions are associated with poor combustion. Thus, if high levels of CO are present in combustor flue gases, it is likely that significant quantities of MWC organic emissions are also present.

The techniques employed to minimize CO are closely related to those employed to minimize MWC organic emissions. Combustor load is also related to MWC organic emissions. At loads above 100 percent, PM carryover would increase and furnace residence times would decrease, contributing to increased MWC organic (i.e., dioxin/furan) emissions at high loads. The maximum load would be established for each MWC during its compliance test.

According to available information, MWC organics (i.e., dioxins/furans) form on fly ash in the presence of excess oxygen at temperatures in the range of 250 to 400 °C (480 to 750 °F), with maximum formation rates occurring at about 300 °C (570 °F). Available data indicate that cooling flue gases and operating the PM control device at temperatures of 230 °C (450 °F) or less prevents formation of MWC organics (i.e., dioxins/furans) in the flue gas. Flue gas cooling is typically accomplished by the economizer at MWC's with heat recovery capability, but could also be accomplished by other methods such as humidification.

Proper operation of MWC's is key to GCP. Operation of MWC's is complex and, as mentioned above, there are many interrelated parameters that influence emissions. Since only a few parameters such as combustor CO emissions, load, and flue gas temperature, can be specified and measured in emission guidelines, operator certification and training is another element of GCP. The emission guidelines would allow flexibility concerning time requirements for existing MWC's to implement operating certification and training programs.

The American Society of Mechanical Engineers (ASME) has developed a certification program that consists of an initial provisional certification followed by full operator certification. To obtain provisional certification, a candidate must demonstrate that certain requirements of experience and education have been met and must pass a written examination covering the

basics of municipal waste combustion. The initial provisional certificate, which is valid for 5 years, is not specific for any particular MWC technology or jurisdiction.

After attaining a provisional certification and gaining 6 months of experience at a particular MWC facility, a chief facility operator or shift supervisor may pursue an operator certification. This certificate is issued upon passing a site-specific oral examination on the operation, maintenance, and safety procedures at the facility. Operator certificates are valid only for facilities of similar size and technology. They are valid for 3 years and may be renewed upon demonstration that the operator has maintained knowledge of the particular MWC and permit requirements. New certificates are required upon transfer to a facility of a different size or technology. The ASME certification will ensure national consistency and will allow individuals to transfer their certification from one State to another.

In addition, all plant personnel who are in positions associated with the combustion process—including the control room operators, ash handlers, personnel involved with MWC maintenance, and crane/load operators, and any other persons associated with MWC operation should receive training in MWC operation on a yearly basis. Such training is best provided through use of a training manual which focuses on how each subject area, or component of MWC operation, can impact MWC performance and emissions. In addition, the manual should specify remedial measures that are effective in regaining good performance during startups, shutdowns, and malfunctions of the MWC. As with any routine training program, the training manual should be revised as appropriate from time to time to reflect any changes.

The following training elements should be included in any training manual developed under the emission guidelines.

**Introduction.** This portion of the manual should include an explanation of the regulation applicable to MWC emissions and how certain MWC operating procedures (which would be discussed in detail later in the manual) should be followed in order to maintain compliance with the guidelines and to achieve GCP.

**Basic Combustion Theory.** This portion of the manual should address the interrelationships of temperature, residence time, and fuel/air mixing and their effects on combustion performance and destruction of trace organics including dioxins/furans.

**Procedures for Receiving, Handling, and Feeding Waste.** This portion of the manual would address which specific types of MSW should be eliminated from the waste stream because of their physical and chemical characteristics (e.g., oversized, bulky wastes that can jam feed hoppers; explosive or hazardous wastes, such as propane tanks) and materials that cannot be combusted. These wastes may contribute to upsets which result in excessive CO or MWC organic (i.e., dioxin/furan) emissions. Because the loader/crane operator can affect the stability of the combustion process by thoroughly mixing incoming feed material to blend wastes with high and low moisture contents and heating values, this portion of the manual also should include a discussion of the proper waste feed rates and feed uniformity, and their effect on combustion stability. Maintaining combustion stability would aid in achieving continuous reductions in MWC organic emissions.

**Start-up and Shutdown Procedures.** Because higher levels of MWC organic emissions can occur during startup and shutdown due to low combustion temperatures and poor mixing, the training manual should set forth specific procedures for minimizing the effects of these episodes.

**Auxiliary Fuel Use.** Some MWC's fire auxiliary fuel during conditions other than start-up and shutdown (e.g., to maintain steam load during waste feed interruptions). Thus, this portion of the manual should address how changes in operation, such as combustion airflow rates and distributions, may be necessary when firing auxiliary fuels.

**Maintaining Proper Combustion Air Supply Levels.** Providing the proper amount and distribution of underfire (or primary) air is important in maintaining proper MWC temperatures and stoichiometries and in reducing emissions of organics and particulates from the MWC. This is especially important for modular MWC's with primary chambers designed to operate at substoichiometric conditions. As feed rates and waste properties change, it is sometimes necessary to adjust primary air distributions to maintain local stoichiometries. This portion of the manual should address what adjustments are needed depending on the specific MWC design type. In addition, this portion of the manual should also highlight the need for proper design and operation of overfire (or secondary) air because it plays a major role in the mixing process and in the destruction of MWC organics. Again,



secondary air design and operating practices will vary depending on the specific MWC design type. Because air preheat (used to assist in the combustion of high moisture, low heating value wastes) can affect the ability of an MWC to achieve good combustion, this portion of the manual should also instruct the operator to anticipate this potential problem and how to adjust or initiate air preheat as a corrective action.

**Upset or Off-Specification Conditions.** This portion of the manual should provide the operator with guidance on implementing corrective action in response to a number of periodic process upsets, including, but not limited to, low (or excessive) furnace temperatures, high CO levels, high (or low) operating load, high (or insufficient) flue gas cleaning device inlet temperatures, and poor waste burnout conditions.

**Minimization of Particulate Matter Carryover.** This portion of the manual should address the problem of PM carryover and instruct the operator how to minimize PM carryover within normal operating parameters. High levels of PM carryover may increase PM concentrations in the flue gas and may contribute to downstream formation of MWC organics (i.e., dioxins/furans).

**Performance of GCP: Use of GCP,** including exhaust gas cooling to 230 °C (450 °F), in conjunction with PM control can generally achieve dioxin/furan emission levels of 500 ng/Nm<sup>3</sup> (200 gr/billion dscf) or less for existing MWC's except RDF MWC's, taking into account retrofitting the existing MWC. Levels of 1,000 ng/Nm<sup>3</sup> (400 gr/billion dscf) can be achieved at existing RDF combustors.

**Add-on Controls:** The most frequently used PM control devices for existing MWC's are electrostatic precipitators (ESP's) and, less commonly, fabric filters (FF's). Other PM control technologies (such as cyclones, electrified gravel beds, and venturi scrubbers) have been used to a much lesser extent.

In ESP's, flue gas flows between a series of high voltage discharge electrodes and grounded metal plates. Negatively charged ions formed by this high voltage field (known as a "corona") attach to PM in the flue gas, causing the charged particles to migrate toward the grounded plates. Once the charged particles are collected on the grounded plates, the resulting dust layer is removed from the plates by rapping, washing, or some other method, and collected in a hopper. The most common types of ESP's used by MWC's are: (1) Plate-wire units in which the discharge electrode is a bottom-weighted or rigid wire and (2) flat plate units which use

flat plates rather than wires as the discharge electrode.

Fabric filters (also called baghouses) are used at some existing MWC's for particulate control, particularly when used in combination with acid gas control. Fabric filters are of two basic designs, reverse-air and pulse jet. In a reverse-air FF, flue gas flows through unsupported filter bags, leaving the particulate on the inside of the bags. The particulate builds up to form a particulate filter cake. When the pressure drop across the filter cake reaches a defined limit, flue gas flow is stopped and clean air is directed through the filter in the opposite direction, the filter bag collapses, and the filter cake falls off and is collected at the bottom of the hopper. Following cleaning, flue gas is again directed through the clean filter bags and the cycle is repeated. In a pulse jet FF, flue gas flows through supported filter bags leaving particulate on the outside of the bags. To remove the built-up particulate filter cake, a pulse of compressed air is introduced inside of the filter bag, the filter bag expands and the filter cake falls off and is collected. The pulse jet system may be cleaned while on-line or off-line.

Well-designed and operated ESP's or FF's are highly efficient PM collectors and can reduce total PM emission levels to 34 mg/dscm (0.015 gr/dscf) or less (at 7 percent O<sub>2</sub>) at new or retrofit installations. Available data indicate that upgrades of existing ESP's can achieve PM emission levels of 69 mg/dscm (0.030 gr/dscf) or less (at 7 percent oxygen [O<sub>2</sub>]).

Municipal waste combustor metals emissions include arsenic, beryllium, cadmium, chromium, lead, mercury, and nickel. All of these metals, except mercury, are removed with the fine particulates collected by ESP's or FF's. Well-designed ESP's or FF's operated at 230 °C (450 °F) or less remove over 97 percent of arsenic, cadmium, and lead and about 99 percent of beryllium, chromium, and nickel from MWC exhaust.

In general, little or no mercury control is observed at MWC's with PM control alone (i.e., no acid gas controls).

Control of MWC acid gases (including SO<sub>2</sub> and HCl) can be achieved by reaction of dry or slurried alkali sorbents (e.g., lime) into the flue gas. This technology would have to be retrofitted at most existing MWC's. Available acid gas control technologies include addition of dry sorbents into the flue gas duct or into the combustor, and spray drying. Acid gas controls are typically followed by an ESP or a FF. Two levels of acid gas control were

considered in developing regulatory alternatives. These are dry sorbent injection (DSI)/PM control (ESP or FF) systems that provide an intermediate level of acid gas control (approximately 50 percent), and spray dryer (SD)/FF systems that provide higher efficiency control (approximately 90 percent). These two levels are discussed below.

Dry sorbent injection technologies have been developed primarily to control acid gas emissions. However, when DSI is combined with flue gas cooling and an upgraded ESP or a FF, control of MWC organic (dioxin/furan), MWC metal, and MWC acid gas emissions are achieved. Dry sorbent injection/ESP systems are an attractive retrofit control option for existing plants and allow use of the existing (upgraded) ESP. The DSI/ESP technology, is therefore, frequently less expensive than DSI/FF technology for existing plants. Two primary subsets of DSI technologies exist, duct sorbent injection and furnace sorbent injection.

In duct sorbent injection, powdered sorbent is pneumatically injected into either a separate reaction vessel or a section of flue gas duct located downstream of the combustor economizer or quench tower. The sorbent reacts with acid gases to form alkali salts. By lowering the acid content of the flue gas, downstream equipment can be operated at reduced temperatures while minimizing the potential for acid corrosion of equipment. Reaction products, fly ash, and unreacted sorbent are collected with the ESP. Available sorbents include hydrated lime (Ca(OH)<sub>2</sub>), soda ash (NaOH), and sodium bicarbonate (NaHCO<sub>3</sub>).

Furnace sorbent injection generally takes less space than duct injection (a major consideration in retrofit). Furnace sorbent injection technology involves the injection of powdered alkali sorbents into the furnace section of an MWC. This can be accomplished by addition of sorbent to the overfire air, injection through separate ports, or mixing with the waste prior to feeding to the MWC. As with duct sorbent injection, reaction products, fly ash, and unreacted sorbent are collected using the existing (upgraded) ESP or FF.

Both types of DSI systems (duct or furnace injection) followed by an upgraded ESP or FF can achieve a 50 percent reduction in SO<sub>2</sub> emissions or an outlet SO<sub>2</sub> concentration of 30 ppmv at 7 percent O<sub>2</sub> (daily 24-hour average basis). A 50 percent reduction in HCl emissions or an outlet concentration of 25 ppmv is achievable (daily 24-hour average basis) by furnace sorbent injection/ESP or FF



systems. Greater levels of HCl control may be achieved by duct injection, which preferentially controls HCl over SO<sub>2</sub>. The site-specific configuration of existing MWC's will determine whether furnace or duct injection technology is more feasible to retrofit. All types of existing MWC's except RDF's applying either a DSI/ESP or DSI/FF system can meet a dioxin/furan emission level of 125 ng/Nm<sup>3</sup> (50 gr/billion dscf) (at 7 percent O<sub>2</sub>). Existing RDF's with DSI/ESP or DSI/FF systems can meet a dioxin/furan emission level of 250 ng/Nm<sup>3</sup> (100 gr/billion dscf) (at 7 percent O<sub>2</sub>).

A PM emission guideline level of 69 mg/dscm (0.030 gr/dscf) can be achieved for existing MWC's equipped with DSI/ESP or DSI/FF. Dry sorbent injection/ESP or DSI/FF systems achieve 97 percent or greater removal of arsenic, cadmium, and lead, and 99 percent removal of beryllium, chromium, and nickel. In addition, DSI/ESP systems typically achieve about 30 percent control of mercury and DSI/FF systems typically achieve a higher percent removal of mercury. However, the data on mercury emissions and control levels are highly variable among MWC's.

Lime spray drying followed by FF is a higher performance technology than current DSI/ESP or DSI/FF technology and was initially developed to control acid gas emissions. However, the system also controls emissions of MWC organics (dioxins/furans), and MWC metal emissions. In the spray drying process, atomized lime slurry is injected into a SD vessel; the water in the lime slurry evaporates to cool the flue gas and the lime reacts with acid gases to form dry sulfate/sulfite salts that are removed by the FF. The key design and operating parameters that significantly affect the performance of the system are the temperature of the spray dryer reaction/drying vessel and lime-to-acid gas stoichiometric ratio. The outlet temperature is controlled by the amount of water in the slurry. As more water is added, the temperature is lowered.

More effective acid gas removal occurs at lower temperatures, but the temperature must be kept high enough to ensure that the slurry and reaction products are adequately dried prior to collection in the FF. Otherwise, caking will occur and the system may have to be removed from service for removal of the cake. Spray dryer systems generally operate at flue gas discharge temperatures of 150 °C (300 °F) or less. For MWC flue gases containing significant chlorine, a minimum spray dryer outlet temperature of around 115

°C (240 °F) is required to control agglomeration of PM and sorbent by calcium chloride.

Spray dryer/FF systems on existing MWC's can achieve either an 85 percent reduction in SO<sub>2</sub> emissions or an outlet SO<sub>2</sub> concentration of 30 ppmv at 7 percent O<sub>2</sub> (24-hour average basis). Either a 95 percent reduction in HCl emissions or an outlet HCl concentration of 25 ppmv is also achievable by SD/FF systems on existing MWC's. Spray dryer/FF systems also achieve outlet dioxin/furan concentrations in the range of 5 ng/Nm<sup>3</sup> (2 gr/billion dscf) to about 30 ng/Nm<sup>3</sup> (12 gr/billion dscf) (at 7 percent O<sub>2</sub>). The SD/FF systems are the most effective add-on control systems for dioxins/furans, and achieve 99 percent control and low outlet emission levels, however, the exact performance level has not been specified in the proposed guidelines. Measured emission levels vary among MWC's, and additional test data from MWC's with SD/FF controls are currently being collected and analyzed. The exact dioxin/furan emission level achievable by SD/FF controls will be determined prior to promulgation of these guidelines, and a single emission level will be included in the promulgated guidelines. Specific comments are solicited on the achievable emission level.

A PM emission guideline level of 34 mg/dscm (0.015 gr/dscf) is achievable by all MWC's equipped with SD/FF systems. At this PM emission level, SD/FF systems achieve 99 percent removal of all metals except mercury.

The observed removal efficiencies for mercury vary widely among MWC's. Tests at three MWC's with SD/FF controls showed over 70 percent mercury removal rates and outlet concentrations below 200 µg/dscm (85 gr/million dscf). On the other hand, compliance test data from three other MWC's with SD/FF systems indicated little or no mercury control. One of these three MWC's, however, was retested later and results indicated over 75 percent control. It has been postulated that mercury emissions may be related to NO<sub>x</sub> control, and that use of ammonia injection for NO<sub>x</sub> control may reduce mercury control in some cases. However, another possibility is that the adsorption and removal of mercury may be dependent on carbon in the fly ash. Review of data from tests of MWC's with and without NO<sub>x</sub> control tend to show that combustors with very good combustion and very low concentrations of organics and PM in the flue gas upstream of the SD/FF filter achieve lower mercury removal. This may be

because there is little carbon in the fly ash onto which mercury can adsorb for subsequent removal by the FF. Other explanations for the observed variation in mercury control are also possible. A joint EPA/industry task force is being established to investigate mercury emissions and controls. Their finding will be considered in development of the final emission guidelines.

Spray dryer/ESP systems have been used on a few MWC's. Available data indicate that these systems may achieve less removal of MWC acid gas, MWC organic, and mercury emissions than SD/FF systems. However, SD/ESP systems may be an attractive retrofit technology because MWC plants could make use of an existing ESP and would only have to retrofit a SD. This would result in lower costs compared to retrofitting both a SD and a FF. This issue will continue to be investigated, following proposal, and comments on the performance of SD/ESP systems are requested.

A third MWC control method includes MSW materials separation, which is the separation of certain components from the waste stream prior to combustion in an MWC. Additional reductions in MWC emissions, including mercury, may be achieved with application of materials separation as discussed in section V.

#### Regulatory Alternatives for MWC Emissions

Five regulatory alternatives were considered in selecting MWC emissions guidelines for proposal. A baseline alternative is also presented which represents the emission level expected in the absence of the proposed guidelines. For existing MWC's, the baseline level of GCP and add-on emission control varies depending on the type, unit size, and age of the individual combustors.

The five regulatory alternatives considered in developing guidelines for MWC's represent varying levels of control for MWC organics (dioxins/furans), MWC metals (as indicated by PM), and MWC acid gases (including HCl and SO<sub>2</sub>). Some of the regulatory alternatives also subdivide MWC plants into two size categories. Categorization of MWC's into small and large plants was initially considered because: (1) Control cost increases associated with the various control technologies, on the bases of percent of MWC capital cost and dollars per ton of MSW combusted, are greater for small plants, and (2) large plants generally have greater emissions potential and account for over 90 percent of existing capacity.



Therefore, some of the regulatory alternatives require less stringent control of small plants, while others apply the same level of control to all MWC plants. The regulatory alternatives define small MWC plants as those with aggregate existing MWC plant capacities of 225 Mg/day (250 tons/day) of MSW or below, and large plants as those with aggregate MWC capacities greater than 225 Mg/day (250 tons/day) of MSW. The EPA requests comment on whether another size category cutoff might be more appropriate. The aggregate capacity of all existing combustors at the MWC facility is used to determine if the MWC meets the large or small plant definition.

Table 2 presents the five regulatory alternatives in terms of control technologies. Table 3 presents these five regulatory alternatives in terms of the emission limits for dioxins/furans, PM, and acid gases that would be specified

in the actual guidelines. Table 4 presents GCP operating guidelines (see section V for a separate discussion of materials separation).

TABLE 2.—TECHNOLOGICAL BASIS FOR REGULATORY GUIDELINES ALTERNATIVES FOR EXISTING MWC UNITS

Regulatory alternative	Control guidelines by total MWC plant capacity Mg MSW/day (tons MSW/day)	
	Small plants <225 Mg/day (<250 tons/day)	Large plants >225 Mg/day (>250 tons/day)
I	GCP PM control to 0.080.	GCP. PM control to 0.030.
IIA	GCP PM control to 0.080.	GCP. MWC acid gas by DSI. PM control to 0.030.

TABLE 2.—TECHNOLOGICAL BASIS FOR REGULATORY GUIDELINES ALTERNATIVES FOR EXISTING MWC UNITS—Continued

Regulatory alternative	Control guidelines by total MWC plant capacity Mg MSW/day (tons MSW/day)	
	Small plants <225 Mg/day (<250 tons/day)	Large plants >225 Mg/day (>250 tons/day)
IIB	GCP MWC acid gas by DSI. PM control to 0.030.	GCP. MWC acid gas by DSI. PM control to 0.030.
III	GCP PM control to 0.080.	GCP. MWC acid gas by SD/FF. PM control to 0.015.
IV	GCP MWC acid gas by DSI. PM control to 0.030.	GCP. MWC acid gas by SD/FF. PM control to 0.015.

TABLE 3. POTENTIAL EMISSION LIMITS ASSOCIATED WITH 111(D) REGULATORY GUIDELINE ALTERNATIVES

Regulatory alternative		Control levels by plant capacity	
		Small plants <225 Mg/day (<250 tons/day)	Large plants >225 Mg/day (>250 tons/day)
I	Dioxins/furans	500 ng/Nm <sup>3</sup> (1,000 ng/Nm <sup>3</sup> ) *	500 ng/Nm <sup>3</sup> (1,000 ng/Nm <sup>3</sup> ).
	PM	0.080 gr/dscf	0.030 gr/dscf.
	HCl	no limit	no limit.
	SO <sub>2</sub>	no limit	no limit.
	GCP/Operating Standards	See Table 4	See Table 4.
IIA	Dioxins/furans	500 ng/Nm <sup>3</sup> (1,000 ng/Nm <sup>3</sup> )	125 ng/Nm <sup>3</sup> (250 ng/Nm <sup>3</sup> ).
	PM	0.080 gr/dscf	0.030 gr/dscf.
	HCl	no limit	50% or 25 ppmv.
	SO <sub>2</sub>	no limit	50% or 30 ppmv.
	GCP/Operating Standards	See Table 4	See Table 4.
IIB	Dioxins/furans	125 ng/Nm <sup>3</sup> (250 ng/Nm <sup>3</sup> )	125 ng/Nm <sup>3</sup> (250 ng/Nm <sup>3</sup> ).
	PM	0.030 gr/dscf	0.030 gr/dscf.
	HCl	50% or 25 ppmv.	50% or 25 ppmv.
	SO <sub>2</sub>	50% or 30 ppmv.	50% or 30 ppmv.
	GCP/Operating Standards	See Table 4	See Table 4.
III	Dioxins/furans	500 ng/Nm <sup>3</sup> (1,000 ng/Nm <sup>3</sup> )	5 to 30 ng/Nm <sup>3</sup> .
	PM	0.030 gr/dscf	0.015 gr/dscf.
	HCl	no limit	95% or 25 ppmv.
	SO <sub>2</sub>	no limit	85% or 30 ppmv.
	GCP/Operating Standards	See Table 4	See Table 4.
IV	Dioxins/furans	125 ng/Nm <sup>3</sup> (250 ng/Nm <sup>3</sup> )	5 to 30 ng/Nm <sup>3</sup> .
	PM	0.030 gr/dscf	0.015 gr/dscf.
	HCl	50% or 25 ppmv.	95% or 25 ppmv.
	SO <sub>2</sub>	50% or 30 ppmv.	85% or 30 ppmv.
	GCP/Operating Standards	See Table 4	See Table 4.

\* Emission levels in ( ) are for RDF MWC's.

TABLE 4. EMISSION AND OPERATING PARAMETER LIMITS FOR GCP

Pollutant or parameter	Limit
Maximum load level	100% of demonstrated capacity.
Maximum temperature at PM control device inlet	230 °C (450 °F).
CO Emissions:	
Modular MWC's	50 ppmv.
Mass burn waterwall	100 ppmv.
Mass burn refractory	100 ppmv.
Fluidized bed combustor.	100 ppmv.

TABLE 4. EMISSION AND OPERATING PARAMETER LIMITS FOR GCP—Continued

Pollutant or parameter	Limit
Mass burn rotary waterwall.	150 ppmv.
RDF spreader stoker	150 ppmv.
Coal/RDF cofired	150 ppmv.
Operator certification and training.	All operators certified by ASME. Training manual and training for other personnel.

Regulatory Alternative I, the least stringent nonbaseline regulatory alternative shown in Table 2, requires reductions in MWC emissions to levels achievable with GCP for plants of all sizes, as well as various levels of PM control upgrade depending on plant size. For small plants [i.e., those MWC's located at plants with aggregate capacities equal to or below 225 Mg/day (250 tons/day) of MSW], PM emission limits correspond to a level of 180 mg/dscm (0.080 gr/dscf). Under Regulatory Alternative I, this same level would be



applied to all existing small MWC plants with no lower size cutoff. Municipal waste combustors located at large MWC plants (i.e., those with aggregate capacities of greater than 225 Mg/day [250 tons/day] of MSW) would be required to achieve PM control to 69 mg/dscm (0.030 gr/dscf). No add-on acid gas controls would be required for any MWC under this alternative. Based on use of GCP and PM control, emissions of dioxins/furans would be reduced to 1,000 ng/Nm<sup>3</sup> (400 gr/billion dscf) at RDF MWC's and to 500 ng/Nm<sup>3</sup> (200 gr/billion dscf) at all other types of MWC's. The PM controls required would achieve significant reductions in metals emissions, and the higher costs of acid gas controls would not be incurred.

Regulatory Alternative IIA is more stringent than Regulatory Alternative I. Municipal waste combustors at large MWC plants would be required to reduce emissions to levels achievable with moderate acid gas add-on control (based on DSI/ESP or DSI/FF control). Control requirements and emission levels for MWC's at small MWC plants are the same as Regulatory Alternative I. For large MWC plants, MWC acid gas control based on DSI/ESP or DSI/FF (50 percent SO<sub>2</sub> and 50 percent HCl control) and PM control to 69 mg/dscm (0.030 gr/dscf) by ESP upgrade are required, and emissions of dioxin/furan would be reduced to 250 ng/Nm<sup>3</sup> (100 gr/billion dscf) at RDF MWC's and 125 ng/Nm<sup>3</sup> (50 gr/billion dscf) at all other types of MWC's. Under Regulatory Alternative IIA, small MWC plants are allowed a lower cost and less efficient control,

which would avoid the greater costs of add-on acid gas controls for smaller MWC plants.

Regulatory Alternative IIB requires MWC emission reductions to levels achievable with GCP, acid gas control based on DSI/ESP or DSI/FF, and PM control to 69 mg/dscm (0.030 gr/dscf) for all MWC plants (both large and small). This alternative would result in reduction of dioxin/furan emissions as well as reductions in acid gas emissions for all MWC plants, but has higher costs for small plants than Regulatory Alternative I or IIA.

Regulatory Alternative III is similar to Regulatory Alternative IIA by not requiring acid gas control or small MWC plants, but it would require emission levels based on GCP, acid gas control based on SD/FF (85 percent SO<sub>2</sub> and 95 percent HCl control), and PM control to 0.015 gr/dscf on MWC's at large MWC plants, reducing dioxin/furan emissions to a level in the range of 5 to 30 ng/Nm<sup>3</sup> (2 to 12 gr/billion dscf) for large MSW plants. The exact emission level within this range that is achievable with SD/FF controls will be determined prior to promulgation. Compared to Regulatory Alternative IIB, this alternative would require more stringent control of large MWC plants, but less stringent control of small PWC plants. Municipal waste combustors at small MWC plants would be required to achieve emission levels based on use of GCP plus PM control to 80 mg/dscm (0.08 gr/dscf), but no acid gas controls.

Regulatory Alternative IV is the most stringent alternative analyzed. Like

Regulatory Alternative III, Regulatory Alternative IV is based on MWC emission levels achievable with GCP, acid gas control based on SD/FF (85 percent SO<sub>2</sub> and 95 percent HCl control), and PM control to 34 mg/dscm (0.015 gr/dscf) for large MWC plants. For small plants, MWC emission levels corresponding to GCP, acid gas control based on DSI/ESP or DSI/FF (50 percent SO<sub>2</sub> and 50 percent HCl control), and PM control to 69 mg/dscm (0.030 gr/dscf) would be required. The requirements for small MWC plants are, therefore, more stringent than under Regulatory Alternative III. Regulatory Alternative IV has the lowest emissions but the highest cost of any of the regulatory alternatives presented.

#### Model Plant Impacts of the Regulatory Alternatives for MWC Emissions

Table 3 shows the air pollutant emission concentration or present reduction limits for small and large MWC plants under each regulatory alternative, and Table 4 shows GCP operating requirements. Tables 5 and 6 present the ranges of individual small and large model MWC plant emissions and emission reductions of PM, dioxins/furans, and MWC acid gases (SO<sub>2</sub> and HCl) under the baseline and the regulatory alternatives. These emission estimates were derived by applying the different control technologies to small and large MWC plants as specified by the regulatory alternatives. They are expressed as ranges to represent the different types and sizes of MWC's within the small and large MWC plant categories.

TABLE 5.—RANGE OF MWC EMISSIONS FOR INDIVIDUAL SMALL MWC PLANTS UNDER THE BASELINE AND REGULATORY ALTERNATIVES FOR MWC EMISSIONS

Regulatory alternative	MWC metals PM Mg/yr	MWC organics Dioxin/Furan g/ yr	MWC acid gases	
			SO <sub>2</sub> Mg/yr	HCl Mg/yr
Baseline.....	15-190	21-890	30-150	41-210
I.....	6-46	21-130	30-148	41-210
IIA.....	6-46	21-130	30-150	41-210
IIB.....	1-6	5-32	18-89	6-42
III.....	6-46	21-130	30-150	41-210
IV.....	1-6	5-32	18-89	6-42

TABLE 6.—RANGE OF MWC EMISSIONS FOR INDIVIDUAL LARGE MWC PLANTS UNDER THE BASELINE AND REGULATORY ALTERNATIVES FOR MWC EMISSIONS

Regulatory alternative	MWC metals PM Mg/yr	MWC organics Dioxin/Furan g/yr	MWC acid gases	
			SO <sub>2</sub> Mg/yr	HCl Mg/yr
Baseline.....	22/146	109-9,600	300-2,400	420-2,400
I.....	12-73	109-580	300-2,400	420-2,400
IIA.....	12-73	27-150	180-1,400	84-480
IIB.....	12-73	27-150	180-1,400	84-480
III.....	12-73	2.7-16	31-240	13-73
IV.....	12-73	2.7-16	31-240	13-73



As shown in Table 5, PM emissions from small MWC plants (i.e., those with capacities equal to or less than 225 Mg/day [250 tons/day] of MSW) range from 15 to 190 Mg/year (16 to 210 tons/year) at baseline. Regulatory Alternatives I, IIA, and III require small MWC plants to achieve PM levels of 180 mg/dscm (0.08 gr/dscf). Under Regulatory Alternatives I, IIA, and III some small model MWC plants would be required to add additional PM controls to meet this emission level, but other existing MWC plants would already be controlled to a PM level of 180 mg/dscm (0.08 gr/dscf) or below at baseline. Under Regulatory Alternatives I, IIA, and III, PM emission reductions of up to 76 percent over baseline would be achieved for individual model MWC plants, and emissions would range from 6 to 46 Mg/year (7 to 51 tons/year). Under Regulatory Alternatives IIB and IV, which require MWC's at small MWC plants to achieve PM emission levels of 69 mg/dscm (0.030 gr/dscf), all small MWC plants would apply additional controls, resulting in PM emissions ranging from 1 to 6 Mg/year (1 to 7 tons/year). These emissions represent reductions of 80 to 97 percent in PM emissions as compared to baseline emissions for the model MWC plants.

At baseline, dioxin/furan emissions at small MWC plants range from 21 to 890 g/year (0.05 to 2.0 lbs/year). Some small MWC plants incorporate GCP at baseline and would not achieve additional dioxin/furan control under Regulatory Alternatives I, IIA, and III. For those MWC plants which do not employ GCP at baseline, dioxin/furan emission reductions of up to 93 percent can be achieved by the addition of GCP. Under Regulatory Alternatives I, IIA, and III dioxin/furan emissions range from 21 to 130 g/year (0.05 to 0.3 lbs/year). Under Regulatory Alternatives IIB and IV, acid gas controls are required for small MWC plants. The controls required for existing small MWC plants under Regulatory Alternatives IIB and IV reduce dioxin/furan emissions by 75 to 99 percent relative to baseline (depending upon whether the plant employs GCP at baseline) resulting in emissions ranging from 5 to 32 g/year (0.01 to 0.07 lbs/year).

At baseline, SO<sub>2</sub> emissions at small MWC plants range from 30 to 150 Mg/year (33 to 160 tons/year), and HCl emissions range from 41 to 210 Mg/year (45 to 230 tons/year). Since MWC acid gas controls are not required for small MWC plants under Regulatory

Alternatives I, IIA, or III, no reductions in MWC acid gases are achieved under these alternatives. Municipal waste combustor-acid gas controls based on DSI/ESP or DSI/FF technology are required for small MWC plants under Regulatory Alternatives IIB and IV, and emissions of MWC acid gases (SO<sub>2</sub> and HCl combined) would be reduced by over 50 percent. Under Regulatory Alternatives IIB and IV, SO<sub>2</sub> emissions at small MWC plants range from 18 to 89 Mg/year (20 to 98 tons/year), and HCl emissions range from 8 to 42 Mg/year (9 to 46 tons/year).

Table 6 shows the ranges of emission impacts for large MWC plants (i.e., those with aggregate capacities greater than 225 Mg/day [250 tons/day] of MWS) under the baseline and the regulatory alternatives. At baseline PM emissions at large MWC plants range from 22 to 150 Mg/year (24 to 160 tons/year). Municipal waste combustors at large MWC plants are required to meet PM emission levels of 69 mg/dscm (0.030 gr/dscf) under Regulatory Alternatives IIA and IIB, and 34 mg/dscm (0.015 gr/dscf) under Regulatory Alternatives III and IV. A few large MWC plants already meet these levels of control and would not need additional PM controls under the regulatory alternatives. Other large MWC plants would have to retrofit additional PM control under the regulatory alternatives. Under Regulatory Alternatives I through IV, PM emissions at large MWC plants would range from 12 to 73 Mg/year (13 to 80 tons/year) resulting in PM emission reductions for individual model MWC plants of up to 88 percent relative to baseline emissions.

Baseline emissions of dioxins/furans at large MWC plants range from 110 to 9,600 g/year (0.24 to 21 lbs/year). Under Regulatory Alternative I dioxin/furan reductions of up to 90 percent would be achieved at plants which do not employ GCP at baseline. No reductions in dioxin/furan emissions relative to baseline emissions would be achieved at large plants which employ GCP at baseline since no acid gas controls are required under Regulatory Alternative I. Under Regulatory Alternative I, dioxin/furan emissions at large MWC plants would range from 110 to 580 g/year (0.24 to 1.3 lbs/year). Emissions of dioxins/furans would be reduced by 75 to 98 percent (depending on whether the MWC plant employs GCP at baseline) at large model plants under Regulatory Alternatives IIA and IIB due to the requirement of acid gas controls based

on DSI/ESP or DSI/FF. Under Regulatory Alternatives IIA and IIB, dioxin/furan emissions at large MWC plants would range from 27 to 150 g/year (0.06 to 0.33 lbs/year). Under Regulatory Alternatives III and IV, which require acid gas controls based on SD/FF technology, dioxin/furan emissions would be reduced by 98 to greater than 99 percent relative to baseline emissions (depending upon whether the plant employs GCP at baseline) for large MWC plants. Under the two most stringent alternatives, dioxin/furan emissions at large MWC plants would range from 2.7 to 16 g/year (0.006 to 0.035 lbs/year).

At baseline, emissions of SO<sub>2</sub> at large MWC plants range from 300 to 2,400 Mg/year (340 to 2,700 tons/year), and emissions of HCl range from 420 to 2,400 Mg/year (460 to 2,700 tons/year). No reductions in MWC acid gases would be achieved under Regulatory Alternative I since MWC acid gas controls are not required. Under Regulatory Alternatives IIA and IIB, MWC acid gas controls based on DSI/ESP or DSI/FF technology are required for all large MWC plants. Under Regulatory Alternatives IIA and IIB, MWC acid gas emissions would be reduced by over 50 percent resulting in emissions of SO<sub>2</sub> ranging from 180 to 1,400 Mg/year (200 to 1,600 tons/year) and emissions of HCl ranging from 84 to 460 Mg/year (92 to 530 tons/year). Under the most stringent alternatives, Regulatory Alternatives III and IV, large MWC plants are required to control MWC acid gas emissions to levels based on SD/FF technology. Under Regulatory Alternatives III and IV, SO<sub>2</sub> emissions would be reduced by about 90 percent relative to baseline emissions resulting in emissions ranging from 31 to 240 Mg/year (34 to 270 tons/year). This 90 percent long-term average emission reduction level is consistent with a minimum 24-hour average percent reduction of 85 percent. Emissions of HCl would be reduced 97 percent relative to baseline emissions and would range from 13 to 73 Mg/year (14 to 80 tons/year).

Tables 7 and 8 present the ranges of increased (over baseline) capital costs for retrofit air pollution controls, increased total annualized costs, and increased total annualized cost per Mg MSW combusted for small and large MWC plants under each regulatory alternative.



TABLE 7.—RANGES OF INDIVIDUAL SMALL PLANT CONTROL COSTS UNDER THE REGULATORY ALTERNATIVES FOR MWC EMISSIONS

Regulatory alternative	Capital cost (\$1,000)	Total annualized cost (\$1,000/yr)	Total annualized cost per Mg MSW combusted (\$/Mg)
I.....	<1-5,700	<1-1,200	<1-19
IIA.....	<1-5,700	<1-1,200	<1-19
IIB.....	1,600-7,400	660-2,000	10-48
III.....	<1-5,700	<1-1,200	<1-19
IV.....	1,600-7,400	660-2,000	10-48

TABLE 8.—RANGES OF INDIVIDUAL LARGE PLANT CONTROL COSTS UNDER THE REGULATORY ALTERNATIVES FOR MWC EMISSIONS

Regulatory alternative	Capital cost (\$1,000)	Total annualized cost (\$1,000/yr)	Total annualized cost per Mg MSW combusted (\$/Mg)
I.....	<1-15,000	<1-1,900	<1-7
IIA.....	2,200-18,000	1,000-4,300	4-13
IIB.....	2,200-18,000	1,000-4,300	4-13
III.....	7,000-33,000	2,000-13,000	<12-28
IV.....	7,000-33,000	2,000-13,000	12-28

Table 7 shows that under Regulatory Alternatives I, IIA, and III, capital costs of retrofit air pollution controls at individual small MWC plants could increase by less than \$1,000 to \$5.7 million and additional cost per unit of MSW combusted ranges from a negligible increase to an increase of \$19/Mg MSW (\$17/ton MSW). For perspective on the increase in the annual cost of MSW, typical costs for MSW combustion including collection, transportation, combustion, and MWC ash disposal currently range from \$40/Mg (\$36/ton) to over \$100/Mg (over \$90/ton) of MSW collected.

Under Regulatory Alternatives IIB and IV, small plants must add acid gas controls (based on DSI/ESP or DSI/FF), and control costs increase. For Regulatory Alternatives IIB and IV, increased capital costs (relative to baseline) for retrofit air pollution controls at small MWC's range from \$1.6 million to \$7.4 million. Increased annualized costs of control range from \$660,000 to \$2.0 million, and the

increased cost per unit of waste combusted ranges from \$10 to \$48/Mg MSW (\$9 to \$44/ton MSW).

Table 8 shows the increased costs of control (relative to baseline) for individual large MWC plants under the regulatory alternatives. Under Regulatory Alternative I, all large plants must incorporate GCP and meet a PM level of 69 mg/dscm (0.030 gr/dscf). Some existing large MWC plants meet this level of control by design at baseline and incur a negligible control cost, but other MWC plants must add GCP and/or additional PM controls to meet this level of control. Under Regulatory Alternative I, increased capital costs for retrofit air pollution controls (relative to baseline) would range from negligible amounts to \$15 million. Increased annualized costs (relative to baseline) would range from negligible amounts to \$1.9 million, and increased cost per unit of MSW combusted would range from less than \$1 to \$7/Mg MSW (less than \$1 to \$6/ton MSW). Under Regulatory Alternatives IIA and IIB, large MWC plants must add MWC acid gas controls based on DSI/ESP or DSI/FF technology. For Regulatory Alternatives IIA and IIB, increased capital costs (relative to baseline) for retrofit air pollution controls would range from \$2.2 million to \$18 million, total increased annualized costs would range from \$1.0 million to \$4.3 million, and increased cost per unit of MSW combusted would range from \$4 to \$13/Mg MSW (\$4 to \$12/ton MSW). Control costs would increase under Regulatory Alternatives III and IV for large MWC plants since MWC acid gas controls based on SD/FF technology must be added. Under Regulatory Alternatives III and IV, increased capital costs (relative to baseline) for retrofit air pollution controls for large MWC plants would range from \$7.0 million to \$33 million. Increased annualized costs would range from \$2.0 million to \$13 million, and increased cost per unit of waste combusted would range from \$12 to \$28/Mg MSW (\$11 to \$25/ton MSW).

#### National Impacts of the Regulatory Alternatives for MWC Emissions

The national annual emissions of PM, dioxins/furans, and MWC acid gases SO<sub>2</sub> and HCl under the baseline and each of the regulatory alternatives are shown in Table 9. Acid gas (SO<sub>2</sub> and HCl) emissions account for the great majority of the total emission reduction for all alternatives, except Regulatory Alternative I.

TABLE 9.—NATIONAL MWC EMISSIONS UNDER BASELINE AND THE REGULATORY ALTERNATIVES FOR MWC EMISSIONS

Regulatory alternative	MWC metals PM Mg/yr	MWC organics dioxin/furan kg/yr	MWC acid gases	
			SO <sub>2</sub> Mg/yr	HCl Mg/yr
Baseline.....	11,000	200	86,000	110,000
I.....	4,900	54	86,000	110,000
IIA.....	4,900	18	56,000	33,000
IIB.....	3,100	13	52,000	22,000
III.....	4,900	7	17,000	17,000
IV.....	3,100	2	14,000	6,000

As shown in Table 9, PM emissions at baseline are 11,000 Mg/year (12,500 tons/year). Reductions of 57 percent are achieved under Regulatory Alternatives I, IIA, and III, resulting in national emissions of about 4,900 Mg/year (5,400 tons/year). Slightly greater PM emissions reductions (73 percent relative to baseline) are achieved under Regulatory Alternatives IIB and IV since additional PM control must be added to small MWC plants to meet a PM level of 69 mg/dscm (0.030 gr/dscf). All alternatives would achieve a high degree of metals control.

Baseline emissions of dioxins/furans are 200 kg/year (440 lbs/year). Dioxin/furan emissions are reduced 73 percent under Regulatory Alternative I due to the incorporation of GCP at all MWC plants, and reductions of dioxins/furans are increased further under Regulatory Alternatives IIA, IIB, III, and IV since MWC acid gas control requirements become more stringent with each successive alternative. Under Regulatory Alternative IIB, national emissions of dioxin/furans for MWC plants would be reduced by 94 percent, resulting in emissions of 13 kg/year (29 lbs/year). The most stringent alternative (IV) represents a 99-percent reduction in dioxins/furan emissions relative to baseline emissions.

At baseline, national emissions of SO<sub>2</sub> and HCl are 86,000 Mg/year (95,000 tons/year), and emissions of HCl are 110,000 Mg/year (120,000 tons/year). No reductions in these MWC acid gases are achieved under Regulatory Alternative I. Increasing reductions of MWC acid gases are achieved under Regulatory Alternatives IIA, IIB, III, and IV as acid gas control requirements become more stringent. Under Regulatory Alternative IIB, based on DSI/ESP or DSI/FF Control for all MWC's, overall emissions of MWC acid gases are reduced by over 50 percent. National emissions of SO<sub>2</sub> are reduced to 52,000 Mg/year (56,900



tons/year), and emissions of HCl are reduced to 22,000 Mg/year (24,000 tons/year). Regulatory Alternatives III and IV, which are based on SD/FF for large MWC's, reduce SO<sub>2</sub> emissions by 80 to 85 percent and HCl emissions by 85 to 95 percent relative to baseline.

Table 10 shows the national total increased (over baseline) capital costs for retrofit air pollution controls, total increased annualized cost, and overall increased annualized cost per unit of MSW combusted for each of the regulatory alternatives. National increased costs given in this table are for existing MWC plants and plants that are operating or have commenced construction prior to proposal of the NSPS (subpart Ea proposed in today's Federal Register).

TABLE 10.—NATIONAL CONTROL COSTS UNDER THE REGULATORY ALTERNATIVES FOR MWC EMISSIONS

Regulatory alternative	Total Capital Cost (\$10 <sup>6</sup> )	Total annualized cost (\$10 <sup>6</sup> /yr)	Annualized cost per Mg MSW (\$/Mg)
I	510	100	5.50
IIA	930	260	9.00
IIB	1,100	340	11.60
III	2,200	570	19.40
IV	2,400	640	21.80

As shown in Table 10, national total increased capital cost (relative to baseline) ranges from \$510 million under Regulatory Alternative I to \$2.4 billion under Regulatory Alternative IV. Total increased annualized cost ranges from \$100 million/year under Regulatory Alternative I to \$640 million/year under Regulatory Alternative IV. National costs of Regulatory Alternatives III and IV, which require retrofit of SD/FF controls, are approximately double the costs of Regulatory Alternatives IIA and IIB which represent a less stringent level of acid gas control based on retrofit of DSI and use of the existing upgraded ESP. Annualized cost per unit of waste

combusted ranges from \$5.50/Mg (\$5.00/ton) for Regulatory Alternative I, to \$11.60/Mg (\$10.50/ton) for Regulatory Alternative IIB, to \$21.80/Mg (\$19.80/ton) for Regulatory Alternative IV. For perspective, tipping fees currently charged at MWC's for MSW received average about \$44/Mg (\$40/ton) of MSW and range from less than \$10/Mg (\$9/ton) to over \$100/Mg (over \$90/ton). Disposal costs incurred by the general public (including MSW collection, transportation, combustion, and ash disposal), however, typically range from \$40/Mg (\$36/ton) to over \$100/Mg (over \$90/ton) of MSW.

#### Economic Impacts of Regulatory Alternatives for MWC Emissions

Other studies have considered impacts on households to be "severe" if annual compliance cost per household exceeds \$220, or if annual compliance cost per household exceeds 1 percent of median household income. Using these criteria, household impacts are not considered severe under any of the regulatory alternatives for MWC emissions. Under the most stringent alternative (Regulatory Alternative IV), over 90 percent of the household impacts were less than \$60 per year, and less than 0.3 percent of median household income. None of the household impacts in the communities examined were above \$100 per year or 0.5 percent of median household income under any of the regulatory alternatives for MWC emissions.

Economic impacts on government units (counties and municipalities) have been considered "severe" in other studies if both of the following two conditions are met: (1) The sum of total current debt service and additional debt service associated with compliance with the regulation as a percent of total general revenues exceeds 15 percent, and (2) the sum of the average sewerage and sanitation cost per household and the control cost per household as a percent of median household income exceeds 1 percent. Government units

have also been considered to be severely affected if a third condition is met: (3) control costs as a percent of total general expenditures exceed 1 percent. Using these criteria, the analyses indicate that the increased costs imposed by any of the regulatory alternatives for control of MWC emissions do not result in severe economic impacts on government units.

The EPA believes that these studies, which were also used by EPA in assessing impacts of the proposed RCRA Subtitle D standards, provide a reasonable measure for evaluating impacts, since the studies are specifically designed to gauge impacts on households and governmental entities.

It is difficult to estimate the impact of cost increases on actual tipping fees at MWC's. This is because these fees, which are payments to MWC's for permission to dump MSW at the MWC, are set by local governments and may include subsidies. However, for our analysis, if it is assumed that all increased costs are passed through to the tipping fee, then tipping fees for the various size plants would increase by the amounts shown in Tables 7 and 8. Under the least stringent alternative (Regulatory Alternative I), tipping fees for the various MWC plants would increase by less than \$1 to \$13/Mg (less than \$1 to \$12/ton) of MSW combusted, and under the most stringent alternative (Regulatory Alternative IV), tipping fees would increase by \$8 to \$47/Mg (\$7 to \$43/ton) of MSW combusted. For comparison, the average MWC tipping fee is currently about \$44/Mg (\$40/ton) MSW, although tipping fees charged at individual sites can range from negligible to over \$100/Mg (\$90/ton) of MSW.

#### Partial Benefits Analysis

Table 11 presents partial total and incremental national benefits, benefit to cost ratios, and an implicit valuation of acid gas emission reduction under each of the five regulatory alternatives.

TABLE 11.—PARTIAL NATIONAL BENEFITS OF THE REGULATORY ALTERNATIVES FOR MWC EMISSIONS

Regulatory alternative	Partial benefits for PM control (\$10 <sup>6</sup> /yr)		Annualized costs (\$10 <sup>6</sup> /yr)		Overall B/G ratio	Incremental B/C ratio	Value of MWC acid gas control resulting in incremental B/C = 1.0 (\$/MG)
	Total	Incremental	Total	Incremental			
I	100	100	100	100	1.0	1.0	0
IIA	100	0	260	160	0.4	NA	1,600
IIB	130	27	340	80	0.4	0.3	3,200
III	100	0	570	230	0.2	NA	6,000
IV	130	0	640	300	0.2	NA	5,800



The benefits shown are only for emission reductions of PM. Benefits are calculated based primarily on reduced mortality, morbidity, and property deterioration. The benefits of PM emissions reduction are valued at \$16,000/Mg (\$14,000/ton). This figure is significantly greater than previous Agency estimates for PM. The EPA requests comment on the methodology and data used to derive these estimates.

Under Regulatory Alternative I, the incremental benefit to cost ratio is equal to 1, and incremental net benefits are equal to incremental costs. Under the remaining alternatives acid gas control is applied. The MWC acid gas (HCl and SO<sub>2</sub>) emissions would have to be valued at \$3,200/Mg (\$2,900/ton) or more for the incremental benefit/cost ratio for Regulatory Alternatives IIA and IIB to be greater than 1. Acid gas emissions would have to be valued at more than \$5,800/Mg (\$5,300/ton) for the incremental benefit/cost ratio to exceed 1 under Regulatory Alternatives III and IV.

While EPA benefit estimates for SO<sub>2</sub> emissions reduction are generally about \$1,250/tons HCl emission reduction benefits have not been qualified. Emissions reductions of HCl are greater than for other pollutants, and modeling indicates that some plants have ambient HCl concentrations that exceed the HCl welfare effects level of 3 µg/m<sup>3</sup> (1.3 gr/million dscf) (annual average) at baseline. Regulatory Alternatives IIA, IIB, III, and IV would reduce HCl emissions by from 50 to 95 percent, and reduce ambient concentrations to below the welfare effects level for all model plants. Despite these potential benefits, no monetary evaluation of HCl emissions is possible at this time. A dose-response function relating health and welfare effects to reduced emissions of HCl is not currently available. Thus, potential benefits associated with these alternatives in terms of reduced HCl emissions are not considered by the benefits analysis.

There are also other benefits not included in the analysis. Health effects benefits for dioxins/furans control were not included. Health effects benefits from reduced exposure to metals were also not included, but have been at least partially counted via the PM benefits analysis. In addition, benefits from reduced landfilling and reduced emissions of acid gases which contribute to acid rain have not been included in the analysis. The benefits analysis does not take into consideration the reductions of MWC organics, MWC metals, and MWC acid

gases resulting from the materials separation requirements nor the nonair quality environmental benefits achieved by materials separation; however, these benefits are discussed in section V.

The EPA requests comment on all parts of the benefits analysis. The EPA is especially interested in comment regarding the benefit estimates for PM and SO<sub>2</sub>, the appropriate benefits for HCl and dioxin/furan control, and other benefit(s) not included in this analysis.

**Regulatory Alternative Selected.**—Under the proposed guidelines, the selected alternative for control of MWC emissions from existing MWC's encompasses features of Regulatory Alternatives IIB and III. The selected alternative is based on the determination that the combination of GCP and an ESP to control PM emissions to a level of 60 mg/dscm (0.030 gr/dscf) is best demonstrated technology for controlling MWC emissions from existing MWC's at small MWC plants with the aggregate capacities of up to 225 Mg/day (250 tons/day) of MSW.

For MWC's located at large MWC plants with aggregate capacities to combust greater than 225 Mg/day (250 tons/day) but less than or equal to 2,000 Mg/day (2,200 tons/day), the selected alternative is based on the determination that the combination of GCP and DSI/ESP or DSI/FF is best demonstrated technology for controlling MWC emissions from existing MWC's in this size range.

The alternative selected for control of MWC emissions from existing MWC's at regional MWC plants with aggregate capacities greater than 2,000 Mg/day (2,200 tons/day) is based on the determination that the combination of GCP and SD/FF is best demonstrated technology for controlling MWC emissions from MWC's in this very large plant size range.

While the emission levels are based on performance of the technologies, the owner or operator of an MWC could use other technologies to comply with the emission guidelines. In particular, EPA will continue to investigate performance of SD/ESP systems after proposal.

The regulatory alternatives selected for each of the three size categories of MWC's represent best demonstrated technology considering cost, nonair quality health, and environmental impacts and energy requirements. The combinations of control technologies identified as best demonstrated technology have been demonstrated at

MWC's in the U.S., and no severe cost or economic impacts are expected to result from their application.

Relative to the regulatory baseline, the alternatives selected achieve over 90 percent reduction in MWC organic emissions, about 70 percent reduction in emissions of PM, and over 50 percent reduction in emissions of MWC acid gases. The annualized costs for these alternatives for controlling MWC emissions are about \$10.90/Mg (\$9.90/ton) of MSW, which is comparable to the cost increase for the NSPS proposed in today's Federal Register.

Application of controls based on SD/FF were chosen for regional existing MWC plants with capacities above 2,000 mg/day (2,200 tons/day) since these plants have very large MWC emissions potential and they account for about 25 percent of the total existing MWC capacity. As shown in Table 12, 8 plants currently operating and 7 plants under construction would be subject to the regional MWC plant guidelines. The average age of the eight currently operating regional MWC's is about 4 years, so they are very new and will likely be in service for several decades. In addition, 5 of these 15 existing regional MWC's already either have installed or are currently planning to install SD/FF emission control systems. Most of the plants without SD/FF control have provided space to retrofit a SD/PM control system. The EPA requests comments concerning the proposal to require more stringent emission controls (i.e., based on GCP and SD/FF) for regional MWC's. Comments on the specific level of dioxin/furan control that should be specified in the guideline are also requested. As mentioned previously, a range of 5 to 30 ng/Nm<sup>3</sup> (2 to 12 gr/billion dscf) is being proposed, while additional data from MWC's with SD/FF systems are being collected and analyzed. At promulgation, a single emission level will be adopted. Another control option that could be considered for regional MWC's is a SD/ESP system. However, as previously discussed, available data indicate performance of these systems is not as good as SD/FF performance. The EPA will continue to investigate performance of SD/ESP systems after proposal, and requests comments on this control option. The EPA solicits comment on the proposed 2,000 Mg/day [2,200 tons/day] cutoff for the very large MWC's (regional MWC's) and whether another cutoff level may be more appropriate.



TABLE 12.—EXISTING MWC'S LARGER THAN 2,000 MG/DAY CAPACITY

City/County	State	Capacity (Mg/day)	Acid gas Control	Best acid gas control (SD/FF)
Operating				
Baltimore (Resco)	MD	2,050	No.....	No.
Bridgport..	CT	2,050	Yes.....	Yes.
Columbus.	OH	2,750	No.....	No.
Dade County.	FL	2,750	No.....	No.
Detroit.....	MI	3,000	No.....	No.
Indianapolis.	IN	2,150	Yes.....	Yes.
Pinebluffs	FL	2,750	No.....	No.
Westchester County Under Construction	NY	2,050	No.....	
Bergen County (Ridgely)	NJ	2,750	Yes.....	No.
Broward County (South).	FL	2,050	Yes.....	No.
Delaware Co.	PA	2,450	Yes.....	Yes.
Essex County.	NJ	2,050	Yes.....	No.
Fairfax.....	VA	2,750	Yes.....	Yes.
Hempstead.	NY	2,050	Yes.....	Yes.
Honolulu...	HI	2,550	Yes.....	No.

Although additional reductions of about 5 percent for MWC organic emissions, and 30 percent for MWC acid gases could be achieved by application of SD/FF systems to all MWC's at

plants with aggregate capacities above 225 Mg/day (250 tons/day) of MSW (Regulatory Alternatives III and IV), the cost impacts would be unreasonable. The average cost (over baseline) of retrofitting SD/FF systems on typical large MWC plants (MWC plants with aggregate capacities greater than 225 Mg/day [250 tons/day] but less than or equal to 2,000 Mg/day [2,200 tons/day] of MSW) would be about \$23/Mg (\$21/ton) of MSW compared to an average of about \$10/Mg (\$9/ton) for retrofitting DSI alone. Thus, the average cost for application of DSI systems to large MWC plants is close to the national average disposal cost increase for the selected alternative (\$10.90/Mg [\$9.90/Mg] of MSW), but the average cost of retrofitting SD/FF systems would be more than twice this amount. In addition, application of SD/FF systems to all MWC's at plants with capacities above 225 Mg/day (250 tons/day) of MSW could roughly double the total national annualized cost (see Table 10).

The costs for retrofitting SD/FF systems on large MWC plants are high because fewer than 10 percent of these plants already have SD/FF systems, so a large number of plants would have to remove their existing ESP's, and retrofit both a SD and a FF. Under the selected alternative, large plants could use or upgrade existing ESP's, and would only have to retrofit DSI acid gas control. Also, MWC's at plants in this size range tend to be older than those at regional MWC's. The average age of MWC's at large plants is about a decade, and some have been in service for 2 to 3 decades. Since these plants tend to be older than

the regional plants, there are likely to be greater retrofit constraints.

The selected regulatory alternative includes GCP and PM control but no acid gas control for small MWC plants with capacities of up to 225 Mg/day (250 tons/day) of MSW. Although additional reductions of about 3 percent for MWC organic emissions and about 8 percent for MWC acid gases could be achieved by application of acid gas controls to small MWC plants, the cost impacts would be unreasonable. As shown in Figure 1, disposal costs (over baseline) for applying DSI/ESP controls increase greatly for small MWC plants. The increased disposal cost for adding DSI/PM control would be as much as \$22 to \$58/Mg (\$20 to \$53/ton) of MSW for typical small MWC plants compared to an increase of about \$4 to \$17/Mg (\$4 to \$15/ton) of MSW for most large MWC plants. Figure 2 shows that application of GCP and PM controls to small plants can result in disposal cost increases of about \$5 to \$28/Mg (\$4 to \$25/ton) of MSW; however, these increases are not as great as those resulting from application of acid gas controls and are more comparable to the \$/Mg cost increases incurred by large plants under the selected alternative. Application of GCP and PM control would result in good control of MWC organic and MWC metals emissions from small plants. Considering the cost impacts and relatively small potential emissions reduction, EPA believes that control of acid gas emissions from small MWC plants would be unreasonable, and that application of GCP and PM control is best demonstrated technology.

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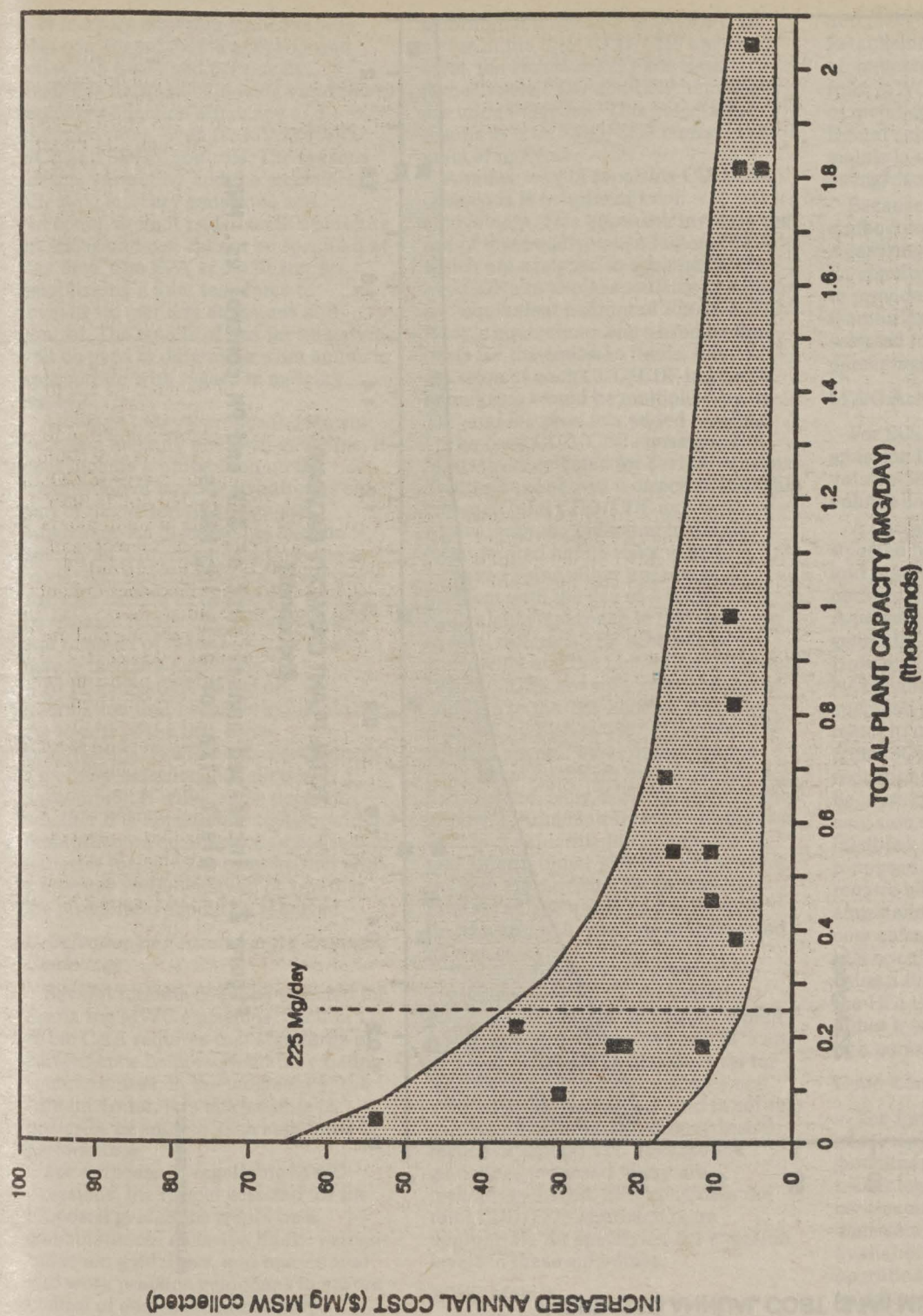


Figure 1. Increased annual cost of GCP and DSI/ESP control vs. MWC plant size for existing MWC's.



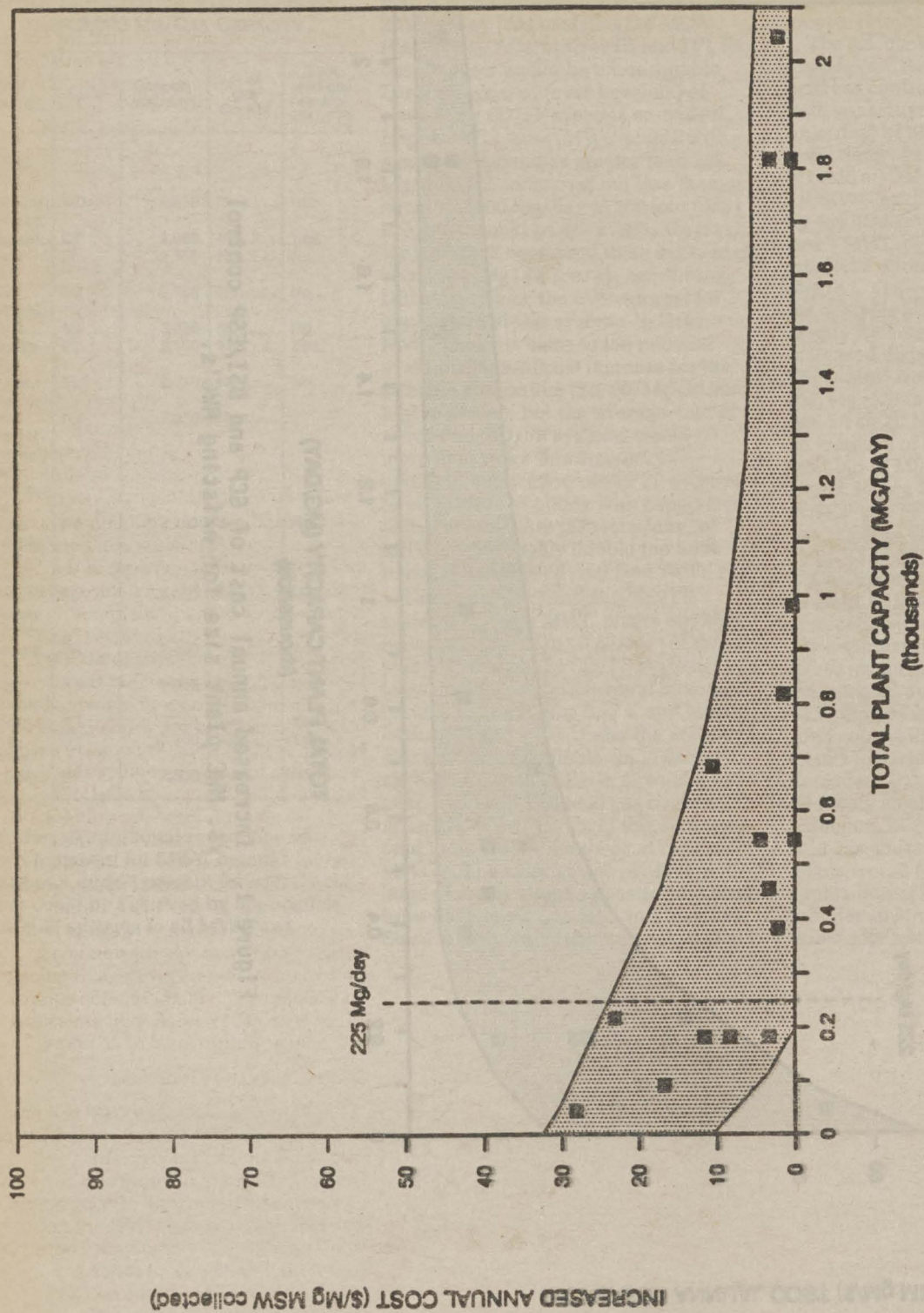


Figure 2. Increased annual cost of GCP and PM control vs. MNC plant size for existing MNC's.

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A mercury emission guideline was also considered, but is not proposed today. As explained previously, available data indicate wide variation in mercury collection efficiency and emission rates, even for MWC's with GCP and SD/FF controls. The reasons for this variability and the mechanisms affecting mercury emissions and collection are not understood. Therefore, an emission level cannot be specified at this time. The EPA and industry are establishing a joint task force to investigate mercury emissions and control. The results of this investigation will be used to determine what action is appropriate with regard to mercury issues.

Although today's proposal does not include a mercury emission guideline, it does include a prohibition on the combustion of household batteries as part of the materials separation provisions. As discussed in Section V, household batteries (including mercury oxide, alkaline manganese, silver oxide, and zinc carbon batteries) are thought to be a major source of mercury in MSW, and removal of these batteries would reduce mercury emissions.

At promulgation, based on information that becomes available and the results of the task force investigation, it will be decided whether a mercury emission guideline is appropriate. It will also be decided whether it is appropriate to maintain the prohibition on combustion of household batteries (possibly in combination with a mercury emission level) or whether the prohibition should be removed.

#### *G. Selection of Format for the Proposed Guidelines*

Several formats could be selected for regulating MWC emissions. Section 111 of the CAA requires that standards of performance be prescribed for existing sources unless, in the judgment of the Administrator, it is not feasible to prescribe or enforce such standards of performance.

For purposes of regulating MWC emissions, the format selected for the proposed guidelines would be a combination of emission limits, percent reduction guidelines, and operational and work practice guidelines to ensure control of each subclass of MWC emissions. The specific format of the guidelines proposed for each pollutant or operational practice and the reasons for selection are discussed below.

#### **MWC Organics**

Under the proposed guidelines, MWC organic emissions are measured in units of total tetra- through octa-chlorinated dibenzo-p-dioxins (CDD) and

chlorinated dibenzofurans (CDF). To arrive at the total CDD/CDF emission level, the emissions of each tetra- through octa-CDD and CDF homologue are added together. This calculation results in total CDD/CDF emissions in units of ng/Nm<sup>3</sup>.

Another way of reporting CDD/CDF emissions is in units of toxic equivalents. This approach involves the use of toxic equivalence factors (TEF), which are assigned to specific CDD's and CDF's to express toxicity in terms of an "equivalent amount of 2,3,7,8-TCDD." If toxic equivalents were used as the basis for the emission limits, the emission of each CDD/CDF isomer or homologue would be multiplied by its TEF and the products added together.

The total CDD/CDF emission level format was selected for several reasons. Studies have shown a direct relationship between total CDD/CDF and toxic equivalency, so reduction in dioxin/furan-related health risks would be achieved using either approach. A problem with the use of a toxic equivalency approach is that there are several different TEF schemes in use worldwide and the factors for individual CDD's/CDF's are subject to change. In addition to the TEF scheme that was adopted by EPA in 1987 (EPA/5625/3-87-012), several other organizations have developed their own schemes (e.g., Switzerland, New York, California, Food and Drug Administration). Furthermore, EPA is considering the adoption of a new International TEF (I-TEF) scheme, but like the current EPA factors, this new set of TEF's will be considered interim and will continue to be revised as necessary.

The disadvantage to using a toxic equivalent scheme for the emission guidelines is that the guidelines would need to be revised by EPA as TEF's are updated. Setting an emission level for total CDD/CDF is a more simple and straightforward approach and is entirely in keeping with the technology-based regime of section 111. Because the guidelines proposed today are technology-based, EPA considers the total CDD/CDF approach more appropriate for specifying the emission levels in these guidelines.

#### **MWC Metals**

Establishing emission limits for each of the numerous metals emitted from MWC's was considered but was not adopted as a reasonable format for regulating MWC metals because the types and amounts of metals emitted from an MWC are highly variable and site-specific. In addition, this method might not be practical economically because of the expense of monitoring

and measuring for specific metals. Establishing an emission limit for PM as an indicator of all the metals emissions from MWC's ensures adequate control of metal emissions. Therefore, the format selected for regulating MWC metals is a PM emission limit (expressed as mg/dscm or gr/dscf).

Because a continuous monitoring methodology does not exist for measuring PM emission rates directly, an opacity guideline was also selected to provide an indirect means of monitoring PM emissions. The format selected for regulating opacity is a percentage format.

#### **MWC Acid Gases**

For SO<sub>2</sub> or HCl emissions, the emission limit is a combined weight- or volume-percent reduction guideline or a volume concentration guideline.

A percent reduction guideline was selected because it is the most accurate and representative measure of the performance of acid gas control systems. A percent reduction guideline is generally appropriate for MWC's. However, in cases where inlet SO<sub>2</sub> or HCl levels are very low and the specified percent reductions would result in concentration levels below 30 ppmv SO<sub>2</sub> or 25 ppmv HCl, these percent reductions may not be achievable because of limitations in SO<sub>2</sub>/HCl emission measurement control loop feedback systems. Therefore, the proposed SO<sub>2</sub> emission limits would require either a percent reduction in SO<sub>2</sub> emissions or a 30 ppmv SO<sub>2</sub> outlet concentration, whichever results in the higher emission concentration level, using a daily 24-hour average. Similarly, the HCl emission limits would require either a percent reduction in emissions or a concentration level of 25 ppmv.

#### **Good Combustion Practices**

The format selected for GCP is a mix of several operational and work practice guidelines since measurement technologies for measuring and continuously monitoring MWC organic emissions leaving the MWC are not available or are not practical. These operational and work practice guidelines consist of limits on CO emissions, MWC load, flue gas temperature at the inlet to the PM control device, and operator certification and training requirements. Each of these items can be related to the level of MWC organic emissions in the gases leaving the MWC, and compliance with the requirements associated with each of these items can easily be monitored.



### H. Performance Test Methods and Monitoring Guidelines

The performance testing and emission monitoring guidelines included in the proposed guidelines would apply to all MWC's subject to the proposed guidelines for MWC organics, MWC metals, and MWC acid gases, except as noted below. An initial compliance test would, unless otherwise specified in the guidelines, consist of three separate runs using the applicable test method, and the arithmetic mean of the three runs shall be used to determine compliance. The same test methods would be used under the guidelines and the NSPS.

All emission guidelines for MWC emissions are corrected to 7 percent  $O_2$  (dry basis). Some MWC's may have carbon dioxide ( $CO_2$ ) monitors rather than  $O_2$  monitors, or may prefer to correct to an equivalent percent  $CO_2$ . Owners or operators may request an equivalent emission limit corrected to  $CO_2$  rather than  $O_2$ . Generally, a correction to 7 percent  $O_2$  is equivalent to a correction to 11 or 12 percent  $CO_2$ . However, there is not an exact conversion that is universally applicable because of variations in the carbon content of MSW. The owner or operator making the request must establish the relationship between  $O_2$  and  $CO_2$  for an individual MWC during compliance testing.

#### MWC Organic Emissions

An initial performance test would be required for all MWC's to determine compliance with the proposed dioxins/furans emission guideline. The emission level pertains to total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans. The performance test would be conducted in accordance with Method 23. Following the initial performance test, an annual performance test would be required for all existing MWC's. However, if three performance tests in a row indicate compliance with the dioxin/furan limit, the guidelines provide that an MWC would be exempt from the annual performance test for the next 2 years. However, at a minimum, each MWC must be tested every 3 years.

#### MWC Metals

An initial performance test would be required for all MWC's to determine compliance with the proposed MWC metals (i.e., PM) emission limit. The performance test would be conducted in accordance with Method 5. Method 1 would be used for determining the number and location of sampling points. Method 3 would be used for flue gas analysis. All performance tests would

consist of a minimum of three runs using Method 5 conducted under representative operating conditions (e.g., full load). The average PM emission rate of the three runs would be used to determine compliance.

Following the initial performance test, an annual performance test would be required for all existing MWC's. However, if three performance tests in a row indicate compliance with the PM limit, an MWC would be exempt from the annual performance test for the next 2 years. However, at a minimum, each MWC must be tested every 3 years.

Under the guidelines, compliance with the opacity limit would be determined using Method 9 for visible emissions. As stated in section 60.11, for the purposes of determining initial compliance, the minimum total time of observations would be 3 hours (30 six-minute averages). A transmissometer would be installed to monitor continuously the opacity and to alert MWC owners and operators of any occurrences of excess emissions requiring corrective action. Opacity data would be recorded and reduced to 6-minute averages using Method 9.

#### MWC Acid Gases

The proposed emission guidelines for MWC acid gases include provisions for both  $SO_2$  and HCl emissions.

**Sulfur Dioxide.**—Continuous monitoring of  $SO_2$  emissions would be required for all existing MWC's at large and regional MWC plants to demonstrate continuous compliance with the emission guidelines. Installation and operation of continuous emission monitoring systems (CEMS) at the inlet and outlet of the  $SO_2$  control device would be required for MWC's to demonstrate compliance with the percent reduction or outlet concentration requirement. Those MWC's that elect to demonstrate continuous compliance solely with the 30 ppmv  $SO_2$  emission limit may install and operate CEMS only at the outlet of the control device. Data collected by the CEMS would be used to determine compliance with the  $SO_2$  percent reduction requirements and emission limits.

Compliance with the  $SO_2$  percent reduction guideline and emission levels would be determined using a 24-hour daily (block) average based on CEMS. All valid data in each 24-hour period must be used to determine compliance. The first 24-hour average percent reduction and emission values calculated after initial start-up would serve as the initial performance test required under section 60.8.

**Hydrogen Chloride.**—Although EPA is requiring  $SO_2$  monitoring as an indication of performance of control of MWC acid gases, the Agency is also proposing to require periodic monitoring of HCl to corroborate  $SO_2$  monitoring as an indicator of HCl emission control. An initial performance test for all existing MWC's at large and regional MWC plants would be required under the guidelines to demonstrate compliance with the proposed HCl emission levels. Compliance with the HCl percent reduction requirements and emission limits would be conducted in accordance with Method 26. Following the initial performance test, an annual performance test would be required for all MWC's at large and regional MWC plants. However, if three performance tests in a row indicate compliance with the HCl guideline, an MWC may skip the annual performance test for the next 2 years. At a minimum, each MWC at a large or regional MWC plant must be tested every 3 years.

#### Guidelines for CEMS

When establishing guidelines that require the use of CEMS for determining compliance, it is necessary to consider that monitors undergo periods of downtime and, thus, are not available 100 percent of the time. Well-maintained CEMS have little downtime. However, minimum data requirements would be established that limit the amount of data permitted to be lost before use of an alternative monitoring method is required. These minimum data requirements would provide the owner or operator with time to maintain and calibrate the CEMS, correct minor malfunctions, and, if necessary, arrange for an alternative monitoring method. The minimum data requirements also would prevent the possibility of a designated facility operating for unreasonably long periods without collecting emission data.

Under the guidelines, CEMS data would be collected during 75 percent of the MWC operating hours per day for 75 percent of the operating days per month. These requirements apply to all CEMS needed to determine compliance with the guidelines ( $SO_2$ , opacity,  $CO$ ,  $O_2$ , or  $CO_2$ ). Collection of this amount of data has been determined to be achievable using a well-operated and properly maintained CEMS. However, this requirement is separate from the compliance test requirements where all valid data would be used to determine compliance even where more than 75 percent of the data is available (e.g., no valid data may be deleted from the calculations to determine compliance).



From an enforcement point of view, not operating CEMS is equivalent to not conducting a required performance test.

In order to ensure that CEMS provide accurate data, daily calibration drift checks and quarterly accuracy audits would be required to be performed on each CEMS. These quality assurance checks would be performed in accordance with 40 CFR part 60, Appendix F, Procedure 1, "Quality Assurance Requirements for Gas Continuous Emission Monitoring Systems Used for Compliance Determination." Appendix F, Procedure 1 applies to all CEMS used for continuous compliance determination under 40 CFR Part 60, Subpart Ca.

#### Combustor Operating Practice Guidelines

As part of GCP, to minimize reduction in MWC organic emissions from the combustor, CO emission limits and specifications for MWC load level and flue gas temperature at the PM control device inlet are proposed.

**Carbon Monoxide.**—The CO emission guidelines are specified for each common type of MWC. Each MWC would be required to install a CEM at the combustor outlet to monitor continuous compliance with the applicable CO emission limit. Compliance would be determined using 4-hour block averages. All valid data would be used to compute each average.

**Operating Load.**—An operating load guideline level of 100 percent of full demonstrated load is specified for all MWC's that generate steam. The full load level would be defined during the initial compliance test, but could be raised if an MWC owner or operator can demonstrate during a subsequent performance test that all other applicable guidelines for MWC organics, MWC metals, MWC acid gases, and the CO emission limit can be met while operating at a higher load.

All MWC's subject to load limits would be required to install monitors to continuously measure steam flow, and compliance would be determined by calculating 1-hour averages. This requirement would not apply to MWC's that do not generate steam.

**Temperature.** Temperature would be continuously monitored at the inlet to the PM control device to determine compliance with the 230°C (450 °F) temperature limit. A block 4-hour average would be used to determine compliance.

#### Operator Certification and Training

Operator certification and site-specific training of MWC operating personnel would also be required by the

proposed guidelines. There are no test methods pertinent to operator training, but all MWC plants would have to keep records of certification and training as described in section IV.I.

#### I. Reporting and Recordkeeping Guidelines

The proposed guidelines would require owners and operators of all designated facilities to submit notification of the anticipated date of demonstration of the initial performance test and performance evaluation of the CEMS.

After the initial performance test has been completed, the proposed guidelines would require the submission of quarterly compliance reports for the combustor operating parameters that are continuously monitored (CO, load level, and flue gas temperature) for all MWC's. In addition, quarterly compliance reports for SO<sub>2</sub> would be submitted for all MWC's at large and regional MWC plants. Quarterly excess emission reports for opacity must also be submitted for all MWC's. The proposed guidelines would also require that annual compliance reports for dioxins/furans and PM be submitted for all MWC's. Annual compliance reports for HCl would also be submitted for all MWC's at large and regional MWC plants. However, if three performance tests in a row indicate compliance with the dioxin/furan, PM, or HCl emission limits, an MWC would be exempt from the annual tests for that pollutant and a simplified annual report may be submitted for the next 2 years.

These quarterly and annual reports would include, as applicable for the period covered by the report: (1) Any period where emissions exceeded guidelines, or where values of monitored operating parameters were in violation of the guidelines; (2) results of all annual performance tests; (3) all 24-hour average SO<sub>2</sub> emission rates and percent reduction values (except for MWC's at small MWC plants) and 4-hour block average CO emission rates calculated during the reporting period; and (4) identification of any periods for which data were excluded from these calculations. In addition, each quarterly report would include the results of the daily CEMS drift tests and quarterly accuracy determinations as required under Appendix F, Procedure 1.

If the minimum amount of data were not obtained for a 24-hour average period, reasons for failure to obtain sufficient data (e.g., CEMS malfunction), and a description of corrective action taken would also be included, along with all information used to calculate the 24-hour average values. Also, if the

minimum amount of data (75 percent of the operating hours per day and 75 percent of operating days per month) were not obtained, this must be included in the quarterly reports and reasons specified.

The proposed guidelines would also require that certain types of records be maintained. Records to be maintained include all data outputs of the CEMS; all quarterly and annual reports submitted under this rulemaking; and all records required under Appendix F, Procedure 1. The required operating manual must be updated annually and be kept readily accessible. Records of operator certification and training of MWC operating personnel are required. All required records would be maintained for 2 years following the date of such records, after which they could be discarded.

The reporting and recordkeeping requirements in the proposed guidelines are necessary to provide enforcement personnel with the data and information necessary to ensure that existing MWC's achieve continued compliance with the proposed guidelines. At the same time, these requirements would not impose an unreasonable burden on MWC owners or operators.

#### J. Malfunction Provision

The MWC guidelines being proposed today apply at all times, except during periods of startup, shutdown, and malfunction. A special provision is being added to these proposed guidelines which places a limit of 3 hours per occurrence on the time that a plant can claim an exemption from the guidelines due to start-up, shut-down, or malfunction. This provision does not change the definitions of start-up, shut-down, and malfunction in the General Provisions nor does it change any of the requirements in the General Provisions. Malfunction is defined as "any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions" (40 CFR 60.2). As specified in 40 CFR 60.7, records must be maintained of the occurrence and duration of any start-up, shut-down, or malfunction, any emission levels occurring during such times, the nature and cause of any malfunction, and corrective action taken or preventive measures adopted. These records must support a determination, on a case-by-case basis, that a period of



emissions above the allowable limit should be considered as start-up, shut-down, or malfunction. The compliance provisions in 40 CFR 60.8 also specify that "at all times, including periods of start-up, shut-down, and malfunction," owners or operators shall operate and maintain the designated facility and air pollution controls to minimize emissions.

Most MWC's are base-loaded and operate either continuously or on a Monday through Friday schedule, so the time spent to start up and shut down these MWC's is minimal, with only one start-up and shut-down per week. Furthermore, the proposed MWC guidelines apply only while MSW is being combusted. Since most MWC's fire fuel oil or natural gas during warm-up and then switch to firing MSW once the MWC is at operating temperature, the proposed MWC guidelines usually would not apply during warm-up, but would become applicable as soon as MSW is introduced into the MWC. Similarly, shutdowns would not take more than 3 hours while MSW is being fired.

Due to the configuration of most control systems, maintenance can be performed on line to repair most malfunctions. In some cases, such as replacing a rotary atomizer or spray nozzle, the load must be reduced while maintenance is being performed, but the time spent operating at reduced load would be short. For DSI/ESP or DSI/FF systems (which are likely to be used by many plants under the proposed guidelines) most repairs to the DSI as well as to the ESP or FF system can also be performed on-line, but some ESP malfunctions may require a shutdown. If

any malfunction would take more than 3 hours to repair, the MWC would shut down to complete the repair.

#### *K. Compliance Times and Enforcement Considerations*

The amount of time required for an existing MWC plant to retrofit its current control system to comply with the proposed emission guidelines will depend on the individual characteristics of the plant. Some important plant characteristics are the MWC design type, the MWC size, the controls currently in place, and the amount of available space near the MWC. These characteristics will influence such considerations as the time needed to design the retrofit system, the time delay anticipated when ordering necessary equipment, and time needed to construct, install, and start up the retrofitted system.

As an example, a typical large MWC plant with two MWC's (each with 910 Mg/day [1,000 tons/day capacity]) would have to install dry sorbent injection equipment to reduce both HCl and SO<sub>2</sub> emissions by 50 percent. Assuming ESP's are already in place that reduce PM emissions to 69 mg/dscm (0.030 gr/dscf), downtime is expected to be 3 months per MWC. Total compliance time is expected to be about 19 months based on 7 months for front-end engineering and 12 months from the time the contract is awarded until startup. If significant space limitations exist, an additional 6 months (or a total of 25 months) could be required. Compliance times, therefore, should normally be under 3 years. Thus, a compliance time of 3 years is included in the emission guidelines.

#### *V. Rationale for Guidelines for Materials Separation*

##### *A. Background*

Currently, the U.S. generates about 150 million Mg (160 million tons) of municipal solid waste (MSW) per year, and under current waste management practices, this amount is expected to grow steadily through the year 2000. Much of the waste stream is attributed to disposable products that are used for a short time and thrown away. These products include "convenience" packaging suited to a fast-paced lifestyle, such as fast food containers and microwavable food packaging. Figure 3 shows the percent contribution (on a mass basis) of each of the major classes of waste materials to the total MSW stream. As shown in Figure 3, more than 40 percent of the solid waste stream consists of paper and paper products discarded in houses, offices, and factories. Yard waste makes up another 18 percent of the total. The other major components are metals (8.7 percent), glass (8.2 percent), plastics (6.5 percent), and food wastes (7.9 percent). At present, about 80 percent of the total MSW is landfilled, about 10 percent is combusted in municipal waste combustors (MWC's), and about 10 percent is recycled. The "Agenda for Action" indicates that by 1992, 25 percent of the MSW stream should be diverted by source reduction and recycling. Also, the percent landfilled should decrease from 80 percent to 55 percent, and the amount of MSW combusted in MWC's should increase from 10 percent to 20 percent.

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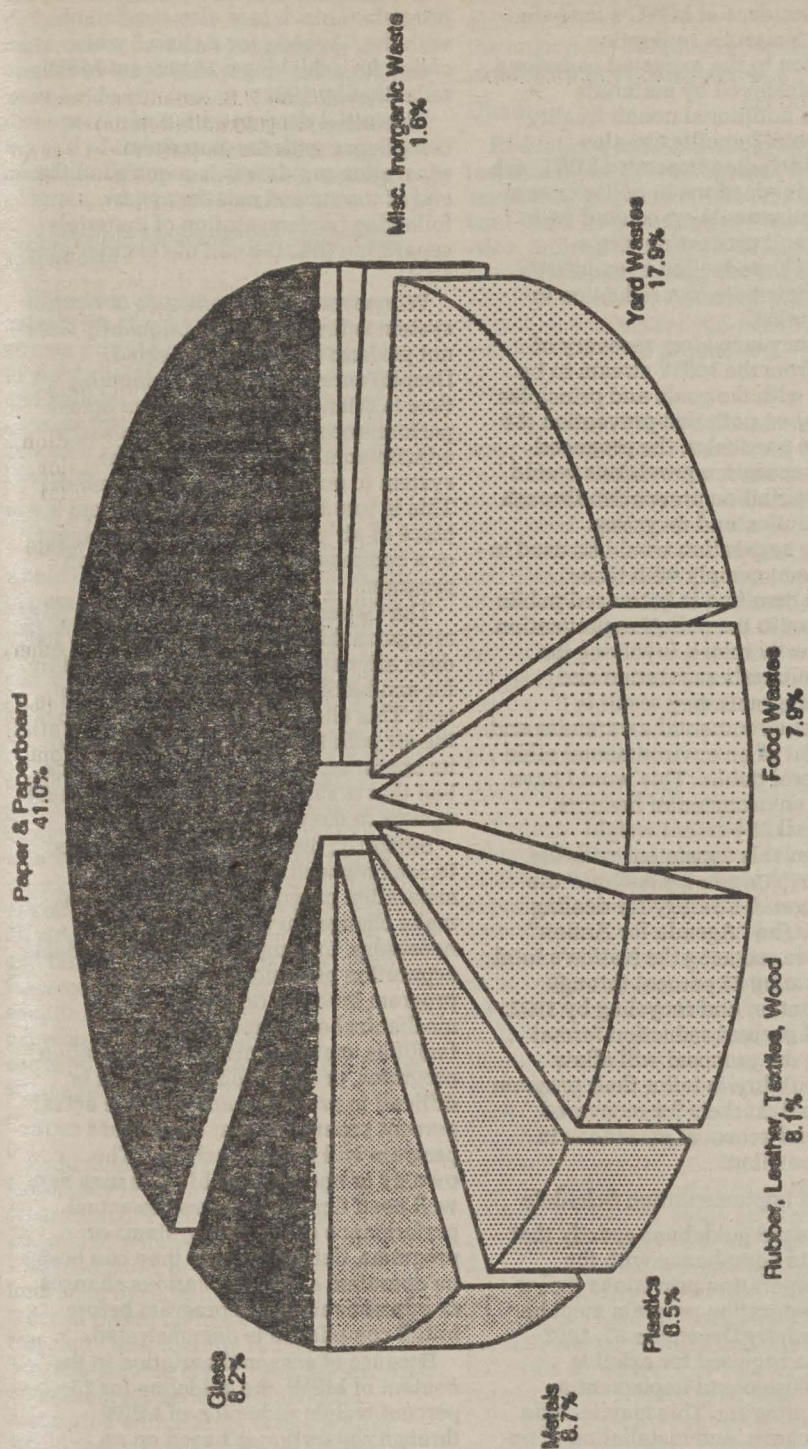


Figure 3. Gross discharges, by weight, of MSW materials.

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### *B. Selection of Regulatory Alternative for Materials Separation Selection of Alternative*

As discussed in this proposal, materials separation refers to the separation and removal of certain components from MSW prior to combustion in an MWC. In many cases, materials separated from MSW can be recycled, thereby preserving natural resources. Recycling these materials would also reduce the amount of waste to be combusted or landfilled, and could provide funds (\$) to offset separation costs. By reducing the amount of waste to be combusted, overall MWC emissions can be reduced. In addition, emissions of specific constituents of MWC emissions can be reduced by separating certain classes of waste materials. Materials separation technology is applicable to all types of MWC technology including, but not limited to, mass burn MWC's, refuse derived fuel-fired (RDF) MWC's, and modular MWC's.

The proposed guidelines would require that all MWC's achieve an overall 25 percent or greater reduction (annual average by weight) of MSW through separation for recovery of one or more of the following materials: paper and paperboard; ferrous metals (including white goods); nonferrous metals; glass; plastics; household batteries; and yard wastes. In calculating the 25 percent weight reduction, a maximum credit of up to 10 percent would be allowed for yard waste separation. The remainder of the 25 percent would come from the other listed materials.

The proposed guidelines would also prohibit the combustion of large lead-acid vehicle batteries (wet lead-acid batteries weighing more than 5 kg [11 lbs] that are manufactured for use in motor vehicles, vessels, or aircraft, or any other use). A program to remove household batteries prior to combustion would also be required.

Separation of the materials discussed above may be achieved by mechanical or manual separation at the MWC, or off-site mechanical or manual separations, or by community source reduction or materials separation (recycling) programs, or a combination thereof.

Processing of MSW to remove these types of materials prior to combustion yields benefits in terms of reduced emissions potential for all components of MWC emissions including: MWC organics, MWC metals, and MWC acid gases. Emissions of nitrogen oxide (NO<sub>x</sub>) would also be reduced. In addition, MWC steam generation efficiency and

MWC operating availability have been shown to increase at MWC's that are practicing materials separation.

In addition to the expected emissions reduction achieved by materials separation, additional nonair quality environmental benefits are also expected, including improved MWC ash quality and reductions in pollution and energy requirements associated with extracting and processing virgin materials. The reduction in emissions will also contribute to a reduction in global warming.

The Agency considers recovery of materials from the MSW stream to be consistent with the goals and principles of its policy on pollution prevention (54 FR 3845). In particular, the proposed materials separation provisions would encourage pollution prevention through source reduction and recycling. Community separation would be used in many areas to comply with these provisions, resulting in increased public participation in the pollution prevention program. Furthermore, involving the public in materials separation and recycling programs may result in increased environmental awareness and development of an environmental ethic by the general public. This would have long-range environmental benefits.

The overall 25 percent weight reduction level is consistent with the goals of the "Agenda for Action," the Agency's overall strategy for dealing with MSW. The "Agenda for Action" goals include reducing the Nation's total MSW stream by 25 percent through source reduction and recycling by 1992. The overall percent reduction format included in the proposal will allow MWC's flexibility to tailor their program to fit regional markets for recovered materials and seasonal variations in MSW composition.

#### *Selection of Implementation Schedule*

The proposed guidelines specify that MWC's be in compliance with the materials separation provisions (i.e., a materials separation program must be implemented) by December 31, 1992. Time will be required for existing MWC's to design and implement a separation program. This may include design, purchase, and installation of on-site separation equipment, and/or negotiations and development of contracts with third parties to implement off-site community separation programs. Putting a program in place to achieve the separation requirements is a relatively complex process which could take up to 2 years, and the December 31, 1992, date provides this amount of time after promulgation of the guidelines to design

and implement a materials separation program. This date is also consistent with the "Agenda for Action," which called for achieving a 25 percent MSW reduction by 1992.

The initial demonstration of compliance with the materials separation provisions is required at the end of the second calendar year following implementation of materials separation (i.e., the end of calendar year 1994).

Whenever any new process or control system is first started, it frequently does not perform exactly as expected. Despite careful design and planning, time is often needed to observe actual performance and make the necessary adjustments or refinements to the system to achieve design performance. This is true whether the new system is a piece of air pollution control equipment or a community materials separation program.

The General Provisions in 40 CFR 60.8 recognize this fact by allowing up to 180 days after start up of an affected facility for conducting the initial performance test. This allows time to test and adjust the air pollution control hardware and its operation before conducting a stack test that is submitted to the enforcement agency to demonstrate compliance.

Similarly, time is likely to be needed to see how well a specific materials separation program is performing and make changes in the program, if necessary, to comply with the materials separation provisions. Whether the program involves on-site or off-site mechanical or manual processing facilities, curbside materials separation programs, or some combination, it is difficult to predict in advance the actual percent separation that a specific program will initially achieve. The owners or operators of MWC's may very well need time to measure the actual performance of the new systems or programs, determine how they can best be operated, and make various changes or adjustments to the program before initial compliance is demonstrated.

Because of seasonal variation in the content of MSW, the guideline for 25 percent weight reduction of MSW through separation is based on an annual average. Therefore, MWC owners and operators will not know the percent separation their new system or program is achieving on an annual average basis until the end of the first year of operation; a few months of operation may not be descriptive of annual performance. In order to allow them time to adjust or fine-tune their materials separation program to ensure compliance, the materials separation



provisions provided the time necessary to determine the performance of the materials separation program on an annual average basis before compliance must be demonstrated. Compliance demonstration is, therefore, required at the end of the second calendar year of operation of the materials separation program, which is December 1994.

#### *C. Rationale for Materials Separation Guidelines*

Recovery of each of the targeted categories of materials from the waste stream prior to combustion is expected to yield specific air emissions, energy, and collateral benefits. The Agency expects that separation of the specified categories of material would yield the following benefits:

##### **Paper and Paperboard**

Reductions in MWC metal emissions would result from reduced combustion of paper impregnated with lead-based inks and mercury-based fungicides. Also reduction in carbon dioxide (CO<sub>2</sub>) concentration would result due to the decreased mass of paper combusted and the increased amount of forest due to reduced timber demand for virgin paper production. A reduction in MWC acid gas emissions would result from reduced combustion of paper impregnated with chlorine-based bleach (i.e., hydrogen chloride [HCl]) and reduced combustion of sulfur-laden paperboard (i.e., sulfur dioxide [SO<sub>2</sub>]). Indirect reduction in CO<sub>2</sub> and other emissions would also result from reduced energy consumption resulting from increased paper and paperboard recycling and the corresponding reduction in virgin paper and paperboard production.

##### **Ferrous Metals**

Reductions in MWC metal emissions (especially lead) would result from separation of ferrous materials assembled with lead solder or plated with lead, zinc, or cadmium. Emissions from coke oven batteries would be reduced based on increased use of recycled steel, thereby reducing benzene-soluble organic emissions. Also an indirect reduction in emissions associated with energy consumption would result from increased ferrous metal recycling and the corresponding reduction in virgin steel production.

##### **Nonferrous Metals**

Since nonferrous metals (aluminum cans in particular) are readily recyclable, not only would MWC emissions be reduced through separation, but reductions in energy consumption would also result from increased aluminum recycling and the

corresponding reduction in primary aluminum smelting. Also, reductions in the amount of litter along roadsides and in public places could result.

##### **Glass**

Reductions in MWC metal emissions (especially lead) would result from separating glass materials containing lead (such as television picture tubes). Also, indirect reductions in emissions associated with energy consumption would result from increased glass recycling and the reduction of virgin materials in glass production.

##### **Plastics**

Reductions in MWC metal emissions (especially cadmium and lead) would result from reduced combustion of plastics, which contain such metals as stabilizers and/or in pigments. Potential reductions in emissions of acid gases and chlorinated MWC organics could result from decreased combustion of polyvinyl chloride plastics. Also, reductions in CO<sub>2</sub> emissions and energy consumption would result from increased plastics recycling and the corresponding reduction in virgin plastics production.

##### **Household Batteries**

Reductions in mercury emissions and other MWC metal emissions (including cadmium and nickel) would result from separating household batteries prior to combustion. Add-on control systems typically achieve a lower percent removal of mercury than other metals. As described in section IV, mercury emission data are highly variable and the mechanisms of mercury emissions and controls are not currently understood. A task force is being formed to investigate mercury emissions and controls. However, much of the mercury oxide in MSW is contained in household batteries. Mercury oxide batteries are the type of battery with the highest mercury content, containing about 35 percent mercury, by weight. Common alkaline manganese batteries contain 7 percent mercury, and small silver oxide batteries contain about 1 percent mercury. The widely-used zinc carbon batteries may also contain small amounts of mercury. Therefore, in lieu of a mercury emission guideline, it is proposed that a program be established to remove household batteries from MSW.

Although the Agency is proposing inclusion of a program to remove household batteries, it is recognized that very little information is available on the economic impacts or environmental benefits of such a program. The Agency solicits comments on whether the

program should be required or not, what type of program should be required, what problems will be faced in implementing a program, and how effective a program would be in removing batteries and reducing mercury emissions. The Agency intends to include on the task force representatives from owners and operators of MWC's, State and local governments, and household battery manufacturers.

##### **Lead-acid Vehicle Batteries**

Removal of lead-acid vehicle batteries would result in a direct reduction in MWC metal emissions (especially lead). Also a reduction in MWC acid gas emissions (especially sulfuric acid), and reduction in MWC emissions associated with combustion of plastic lead-acid battery casings would be achieved. Indirect reductions in emissions will also result from the reduced demand for lead from primary lead smelters.

##### **Yard Waste**

Reductions in NO<sub>x</sub> emissions and increased combustion stability would result from a decrease in the nitrogen content and moisture of the MSW. Emissions of MWC organics would be reduced due to improved combustion stability since yard waste often has a high moisture content and exhibits inconsistent combustibility. Also, energy consumption would be reduced due to a decreased need for auxiliary fuel.

The overall 25 percent MSW reduction and vehicle battery and household battery removal can be achieved by demonstrated technologies, including mechanical and/or manual methods or deposit/return programs for removal of each of the specified materials. The EPA's estimated costs of compliance assume that some manual separation at the MWC will be necessary.

Additional information supporting the above conclusions is contained in the docket.

The goal of the materials separation requirements is to encourage removal of multiple materials to achieve reductions in MWC emissions. The typical yard waste content of MSW is 18 percent (by weight), but some communities will have over 25 percent yard wastes. In calculating the 25 percent overall MSW reduction, a maximum credit of 10 percent would be given for yard waste separation to ensure the goal of the materials separation requirements is met.

The EPA believes that materials separation, used in conjunction with good combustion practices, and add-on



controls, will result in further reductions of emissions from MWC's. It is simply common sense, and the Agency's expectation, that reductions in the amount of pollution-generating materials combusted in an MWC will reduce the amount of pollutants in its air emissions. In addition, materials separation should improve the combustion efficiency of MWC's, and thus reduce MWC emissions, by removing noncombustibles like metals, glass, and water-saturated yard wastes from the feed stream to the unit. In fact, there are a number of studies (which are part of the record for this rulemaking) documenting significant reductions in MWC emissions as a result of application of materials separation technologies.

The Agency is, at this time, unable to reliably quantify the emission reductions attributable to materials separation when an MWC is equipped with highly efficient at-the-stack air pollution control devices. Not only are the limited existing test data insufficient to make this quantification, but other difficulties exist as well. First, the composition of waste received at MWC's varies depending on the types of waste generated in the service area and the season of the year. Therefore, the proportion of each separable material in the waste feed will vary among MWC's. Because of this variability, and economic factors, MWC's will choose different ways of accomplishing materials separation, and the percent reduction of specific materials will vary among MWC's. While MWC emissions as a whole will be reduced, it is difficult to predict the specific reduction in each component of MWC emissions (e.g., MWC metals, MWC organics, and MWC acid gases). Second, because of the substantial removals achieved by air pollution control devices, the remaining pollution being measured is small, and it becomes increasingly difficult to measure and interpret reliably with available test methods. In some cases, normal variability in the amount of metals, organics, and acid gas precursors in the incoming feed could make it difficult to interpret emission reductions attributable to materials separation. That is, it will not be possible to determine which reduction is attributable to variable waste feed and which to materials separation.

The processing of MSW to remove specified types of materials prior to combustion will also produce benefits associated with reduced quantities of ash to be landfilled and reduced levels of toxic materials in the ash. The proposed requirement for an overall 25

percent MSW reduction and the prohibitions on the combustion of vehicle batteries and household batteries will yield an appreciable tonnage reduction in the quantities of MWC residues (both bottom ash and flyash) disposed of in landfills. It is expected that the 25 percent MSW reduction coupled with the prohibitions on batteries would result in an approximate reduction of 80 percent in ferrous and nonferrous metals, and glass. This would reduce the tonnage of ash requiring disposal by 30 percent. With respect to ash quality or toxicity, the entire range of air toxics in ash is of concern with regards to fugitive emissions associated with the handling, storage, and transportation of ash. The principal toxic components of ash with respect to groundwater contamination are lead and cadmium. The requirement for materials separation and related prohibitions will produce ashes characterized by substantially lower metals content (especially lead, cadmium, and mercury) and thus, lower toxicity. As with air emissions, the Agency is, however, unable at this time to reliably quantify the actual improvement in ash quality (lower toxicity) to be produced by these requirements.

The Agency believes that the long-term viability of markets for recovered materials would be significantly enhanced by ensuring a stable supply of recovered materials. The Agency believes that a stable market supply would result from the proposed guidelines. Such stable supplies would tend to encourage long-term contracts with materials recovery firms and further the development of alternative end-uses. This same principle was recognized by the Congress in enacting the 1976 Resource Conservation and Recovery Act (RCRA) when it provided that State solid waste management plans shall not preclude States of local governments from entering into long-term contracts for supplying solid waste to resource recovery facilities, operating such facilities, and securing long-term markets for recovered materials and energy [RCRA Section 4003(a)(5)]. See also H. Rep. No. 94-1491, 94th Cong. 2d Sess. 10 (1976) ("Resource recovery facilities cannot be built unless they are guaranteed a supply of discarded material"). The Agency is also aware that the economics of materials recovery is in many cases driven more by avoided landfill or MWC disposal cost than by potential revenues from sales of recovered materials.

#### *D. Materials Separation Methods*

Separation of materials from MSW is accomplished in two ways: household separation (including deposit/return programs) and centralized processing. Household separation is the separation of recyclable materials from the waste by the generator (i.e., household or business); it is presently the primary method of separation in the U.S. At the household level, separation is accomplished by placing waste items (e.g., glass, paper, aluminum, etc.) in segregated containers. These containers are either picked up at the curbside or taken to local recycling bins or buyback centers. Deposit/return systems are also used to encourage separation and recycling of beverage bottles and cans. The homeowners would return the items to the point of purchase. Household separation of yard waste can be accomplished either by backyard composting or by segregating it for separate curbside pick-up where it is transported to a community composting site. Separation of lead-acid vehicle batteries could be achieved by a deposit/return system where the batteries are returned to the battery recycler, battery retailer, service station, or other recycling center. The separation of household batteries could be achieved through a deposit/return system and/or a prohibition on household disposal of batteries with MSW and implementation of separate community collections for batteries. The success of community programs depends on many factors including the level of planning, community participation rate (which may vary depending on whether the program is voluntary or mandatory), and local market demand for separated materials.

An increasing amount of MSW separation is accomplished at centralized processing facilities which operate at MSW transfer stations, landfills, or MWC's. At centralized processing facilities, recyclable items are removed from the waste stream by mechanical separation systems, manual handpicking, or a combination of both. A wide variety of automated processes may be used to separate the various components of MSW.

Ferrous metals are generally removed magnetically, except for white goods (appliances such as stoves, refrigerators, and air conditioners) which are visually identified and removed as waste is unloaded. Household batteries generally use ferrous metal (e.g., steel) casings and can be removed with the ferrous metal fraction. Nonferrous metals are separated by eddy current



(electromagnetic) separation, electrostatic separation (which separates conductors such as metals and paper from nonconductors such as plastic and glass), or by a variety of wet and dry methods which separate metals according to density. Methods for glass removal include wet and dry density methods, pulverization/screening, and optical sorting (by automatic photocells). Mechanical systems currently processing MSW in the U.S. achieve about 80 to 90 percent ferrous metal recovery, 60 to 70 percent aluminum recovery, and 70 to 80 percent glass recovery. Some fractions of yard waste can be removed mechanically. For example, grass clippings and other heavy materials may be gravity separated after screening out larger items. However, the product is not pure, and may contain broken glass and other contaminants. Mechanical systems can separate some paper and plastics from the waste stream using air classification or electrostatic separation, but these systems normally do not separate the various types of paper and plastic into specific material types (e.g., paper grade or plastic resin type). In many cases some manual sorting is performed along with mechanical separation to increase separation efficiency and to remove residual contaminants from the separated fractions.

Currently there are no fully-automated mechanical systems for removing lead-acid vehicle batteries from MSW. At centralized processing facilities, a specialized metal detector, which selectively detects large lead objects, is available and can be used to identify and locate the batteries in the waste traveling on a conveyor belt, and then the battery can be manually removed.

#### *E. Legal Authority to Issue Materials Separation Guidelines*

In this rule, the EPA's proposed determination of the "best technological system of continuous emission reduction", which Section 111 standards of performance must reflect, includes determinations for the precombustion, combustion, and post-combustion stages of MWC operation. Best demonstrated technology for precombustion would include a requirement that new and existing MWC's remove noncombustible, toxic, recyclable, and compostable materials from their feed materials prior to combustion (referred to as "materials separation" in this preamble). The EPA believes that it possesses legal authority to require precombustion materials separation pursuant to section 111. Such requirements are necessary to address the "nonair quality health and

environmental impacts and energy requirements" that Congress requires the Agency to take into account in making a best demonstrated technology determination. Clean Air Act (CAA) section 111(a)(1)(C). The EPA construes this language as requiring it to consider not only the adverse impacts on other environmental media and energy use of Section 111 standards, but also that EPA may consider the nonair health and environmental benefits and energy benefits that can result. Consideration of nonair and energy impacts are an important part of determining what constitutes a "best" technology. (See H. Rep. No. 95-564, 95th Cong. 1st Sess. 128, 129 (Conf. Rep.); H. Rep. No. 95-294, 95th Cong. 1st Sess. 187.)

As noted above, EPA believes that there will be a reduction in MWC air emissions of toxic gases and other pollutants harmful to health as a result of materials separation. These reductions include not only criteria pollutants, but toxics such as lead, mercury, and cadmium. Moreover, as noted in detail in section V.C. above, the Agency also expects the nonair health and environmental benefits from materials separation to be very great. Materials separation will improve MWC ash quality by removing noncombustibles from the unit's fuel stream, thus allowing better thermal destruction in the combustor and so keeping pollutants out of the combustion residues (ash). Materials separation should facilitate growth of markets for recycling by assuring adequate supplies of feed materials for recycling facilities. Recycling of separated materials will reduce the amount of waste ultimately disposed, saving critically scarce landfill capacity and reserving it for wastes for which land disposal is the best management alternative. Recycling of separated materials will also lessen the demand for raw materials, resulting in overall conservation of resources, and other environmental benefits. For example, recycling of newsprint and other paper products reduces the demand for raw timber, which preserves existing forests, a consideration in combatting global warming. Reducing demand for raw materials can also require fewer imports of raw materials. See Section 1002(c)(3) of RCRA where Congress found that "the recovery and conservation of such materials [separated from solid waste] can reduce the dependence of the United States on foreign resources and reduce the deficit in its balance of payments." Congress went on to find that "millions of tons of recoverable materials which could be used are needlessly buried each year,"

and that "methods are available to separate usable materials from solid waste." RCRA section 1002(c)(1)(2). The EPA further anticipates that there will be energy savings associated with increased utilization of recycling. For example, the recycling processes of secondary aluminum, lead, and glass are much less energy-intensive than the corresponding processes that use virgin raw materials. In short, the removal of recyclables and other materials from MWC feed streams advances the national policy "to promote the protection of human health and the environment and to conserve valuable material and energy resources by promoting a national research and development program for \* \* \* new and improved methods of collection, separation, and recovery, and recycling of solid wastes \* \* \* ." RCRA section 1003(a)(9).

Congress authorized EPA to consider nonair quality environmental and energy benefits such as these as an important component of a Section 111 best technology determination. These significant nonair quality environmental and energy benefits cannot be assured without including a materials separation requirement as part of the standard of performance of MWC's. The EPA believes that Congressional intent would be best effectuated by reading the CAA as authorizing EPA to require removal of toxics and compostable and recyclable portions of the MWC feed stream prior to combustion. The statutory language does not prohibit such a standard (indeed, it would be incongruous for it to do so, given the statutory requirement to include nonair and energy considerations in the best technology determination), and appears broad enough to encompass the materials separation requirement.

Thus, a "standard of performance," which EPA establishes for new and existing sources pursuant to section 111, is defined to include not only conventional emission limitations measured at the stack, but also other forms of emission restriction, including operating requirements and precombustion fuel conditioning requirements. See CAA section 302(1) (a "standard of performance" includes "any requirement relating to the operation or maintenance of a source to assure continuous emission reduction.") (emphasis added). Standards of performance must reflect the degree of "emission limitation" achievable, and an "emission limitation" is defined to include "any requirement relating to the operation or maintenance of a source to assure continuous emission reduction."



CAA Section 302(k). Under these provisions, removal of noncombustibles, toxics, recyclables, and compostables may be a "means of operating" an MWC in order to assure continuous emission reduction, and thus can be adopted as part of the section 111 standard of performance.

Other sections of the statute also support the EPA's interpretation that a Section 111 standard of performance may include requirements expressed as other than traditional at-the-stack emission limits where necessary to achieve important air and nonair quality environmental and energy benefits. Section 111(a)(7)(B), for example, authorizes EPA to include "precombustion cleaning or treatment of fuels" as part of new source performance standards. See also H. Rep. No. 95-294 at 189.

(There may doubtlessly be many pretreatment techniques and/or process modifications capable of achieving comparable or improved degrees of emissions control in fossil-fired boilers as well as in most fuel-burn[ing] industrial sources \* \* \*. To this end, the Administrator should take into consideration *all of the processing steps performed on a material from its natural state through to final usage* in determining the requirements under this section for a technological continuous emission reduction system.) (emphasis supplied)

Separating noncombustibles like metals and glass from the feed stream to an energy-recovering MWC is indeed a type of precombustion cleaning of fuel, and consequently furthers the Congressional intent that EPA consider such measures as part of the section 111 standards of performance.

Some persons commenting on draft versions of this proposal suggested that the materials separation requirement could only be authorized as a "design, equipment, work practice, or operational standard" pursuant to CAA section 111(h). They went on to maintain that section 111(h) does not give EPA the authority to require removal of certain constituents from the MWC feed stream. The EPA questions whether the proposed materials separation requirement is a "work practice or operational standard." Certainly, the proposed requirement does not have the degree of mandated operating specificity that Congress sought to avoid in limiting the scope of work practice standards. The proposal does not require an MWC to carry out the proposed materials separation requirement in any particular way (by using particular types of equipment, for example). Rather, the proposal merely describes a minimal level of precombustion feed conditioning which can be achieved in many different

ways (for instance, by relying on a variety of different community source separation programs, or by separating certain recyclables at the MWC while a community separates others).

Even assuming that the proposed materials separation requirement were considered to be a "work practice standard," however, EPA believes that it would be within the Agency's section 111(h) authority. The EPA may promulgate a work practice standard when "it is not feasible to prescribe or enforce a standard of performance." CAA section 111(h)(1). One statutory example of when it is not feasible to prescribe or enforce a standard of performance is when "the application of measurement methodology to a particular class of sources is not practicable due to technological or economic limitations." CAA section 111(h)(2). The legislative history indicates that Congress intended EPA to have authority to promulgate work practice standards when it finds that it is not feasible to develop or measure numerical concentration limits at the stack. See S. Rep. No. 95-127, 95th Cong., 1st Sess. 43, 44 (even though asbestos is capable of measurement, a work practice standard for asbestos was acceptable because of the impossibility of developing a numerical emissions standard).

In this case, EPA is presently unable to measure reliably the reductions in MWC emissions attributable to the removal of noncombustibles, recyclables, and compostables from MWC feed, and so is unable to reliably correlate at-the-stack measurements to materials separation technology. Thus, EPA is unable to develop numerical emissions standards reflecting the performance of materials separation technology. Since stack measurements and numerical standards would be technically impractical, EPA would be empowered to promulgate a "work practice" standard. The EPA also believes that it would be economically and technically impracticable to monitor separately each of the toxics that are in the MWC feed stream (which potentially include each toxic in consumer use in an industrialized society) in order to document the toxics removal achieved by materials separation. The EPA requests comment on these issues.

More fundamentally, EPA also questions whether it is "feasible" to prescribe or enforce a numerical standard of performance within the meaning of section 111(h) where prescribing solely a top-of-stack numerical limitation would preclude obtaining significant nonair environmental and energy benefits

which Congress has directed EPA to consider. The Agency solicits comment on how to interpret the interplay of these statutory provisions. The EPA also requests comment on the related question of how nonair quality and energy considerations are to be taken into account in assessing section 111(h)(3) equivalency demonstrations.

Several interested parties have also argued that the Agency is without authority to promulgate a work practice or operational standard if it also establishes a numerical at-the-stack emission limit for a pollutant. The EPA's current view is that this argument is not persuasive. The statute contains no express command preventing the Agency from adopting a fuel pretreatment or work practice standard as well as a numerical emission limit. Nor does the legislative history state that Congress meant to forbid such a two-part standard of performance. Under these circumstances, EPA may adopt reasonable interpretations of the statutory language that effectuate statutory goals, see *Chemical Manufacturers Association v. Natural Resources Defense Council*, 470 U.S. 1102, 1108 (1985), particularly where the interpretation assures important nonair and energy benefits and also assured an additional reduction in a pollutant regulated by a numerical standard.

#### F. Cost Impacts of the Proposed Guidelines

In the long run, the monetary benefits of separated materials are expected to outweigh the costs, resulting in no net annualized cost increase. However, the initial costs of materials separation at individual MWC plants will be highly variable. Depending on whether local markets are established for resale of materials, and other site-specific factors, the disposal cost at typical existing MWC plants could vary from a net annualized cost of about \$17/Mg (\$15/ton) of MSW combusted to a net credit (savings) of \$19/Mg (\$17/ton) of MSW combusted. Net annualized costs for a small MWC plant (180 Mg/day [200 tons/day] capacity) could range from a cost of \$900,000/yr if no separated materials can be sold to a savings of \$1.0 million/yr if all separated materials are sold; and for a regional plant (2,050 Mg/day [2,250 tons/day]) costs could range from \$9.5 million/yr to a savings of \$11.4 million/yr. Even at the higher cost, the materials separation provisions are acceptable. Higher costs would only be temporary and would decrease over time as markets for separated materials are established.



The estimated costs include annualized capital costs for materials separation equipment and annual operating and maintenance costs. Other costs and credits considered include: credits for reduced landfilling of ash; cost of lost energy revenues (since less steam and electrical energy will be produced by the MWC if less MSW is combusted); and materials sales revenues. At the lower end of the cost ranges, credits are taken for 100 percent sale of the following separated materials: glass, ferrous metals, aluminum, and high density polyethylene and polyethylene terephthalate plastics, while it is assumed the MWC pays a recycler to accept separated paper. At the higher end of the cost ranges, it is assumed that separated materials cannot be sold and must be landfilled. The no-sale assumption is a worst-case assumption. Markets for separated materials are already established in many locations. The proposed guidelines for materials separation and other Federal, State, and local actions will promote stable supplies of separated materials and will encourage development and stabilization of markets. Additionally, the flexibility provided sources by the form of the 25 percent materials separation requirement would allow sources to focus on the recycling of materials with the highest market value. Thus, the Agency believes that there will not be a significant cost for materials separation over the long run.

Thus, despite the range of net costs and credits estimated for individual plants, the national net annualized cost of materials separation is estimated to be negligible (\$0/Mg of MSW) or a net savings over the long run. While no severe economic impacts on households or government units are expected to result from the proposed materials separation guidelines, States would be allowed flexibility in implementing the guidelines, and may consider site-specific difficulties when establishing State regulations. (Also, see "Materials Separation—Combustion Permit" in Section H, "Compliance Provisions".)

#### *G. Overall Agency Strategy to Promote Municipal Solid Waste (MSW) Reduction and Recycling*

As discussed in Section IV.A. of this notice, in February 1988, EPA created an MSW Task Force to specifically address the problem of increasing waste generation and decreasing management capacity. The Task Force was given the assignment of assessing the solid waste problem, examining alternatives for solving it, and developing a well-coordinated strategy of action for

improving the Nation's management of MSW.

In developing the strategy, the Task Force held public meetings and solicited comments from the public and interested environmental groups, trade organizations, and government organizations. The Task Force's recommendations are presented in the report, "The Solid Waste Dilemma: An Agenda for Action" (EPA/530-SW-88-052), and information supporting the recommendations can be found in a supplemental document entitled, "Background Document for Solid Waste Dilemma: An Agenda for Action" (EPA/530-SW-88-054A).

As stated in the "Agenda for Action," EPA "recommends using 'integrated waste management' systems to solve municipal solid waste generation and management problems at the local, regional, and national levels. \* \* \* A key element of integrated waste management is the hierarchy, which favors source reduction (including reuse) to first decrease the volume and toxicity and increase the useful life of products in order to reduce the volume and toxicity of waste. Recycling (including composting) is the preferred waste management option to further reduce potential risks to human health and the environment, divert waste from landfills and combustors, conserve energy, and slow the depletion of nonrenewable natural resources." In the "Agenda for Action," EPA set a near-term "goal of managing 25 percent of our Nation's municipal solid waste through source reduction recycling by 1992." Furthermore, EPA expects the percentage of MSW reduction and recycling to continue to increase after 1992. A number of cities are already achieving 25 percent materials separation. Source reduction and recycling help prevent many of the problems associated with MSW, including the difficulty of siting new landfills and MWC's to handle the large volumes of waste being generated. Preventing generation of wastes and diverting waste components from landfills and MWC's into reuse, recycling, or composting helps to alleviate siting problems and potential risks to human health and the environment attributable to improper management. Waste reduction and recycling also conserve natural resources by reducing the amount of virgin materials needed to produce new products. As the Congress found in promulgating RCRA in 1976, "Methods are available to separate usable materials from solid waste; and the recovery and conservation of such

materials can reduce the dependence of the United States on foreign resources and reduce the deficit in its balance of payments." 42 U.S.C. 6902(c) (2) and (3). Thus, planning and implementing these activities now yields benefits in managing wastes and conserving natural resources in the years to come. The "Agenda for Action" strategy for implementing the Agency's national waste management goals are briefly summarized below.

The "Agenda for Action's" recommendations for recycling include fostering the implementation of existing Federal procurement guidelines (as well as evaluating guidelines for additional commodities), and creating an interagency working group to develop pilot and full-scale projects for separating recyclables in Federal agencies. Markets for secondary materials and recycled goods must be stimulated and stabilized; thus EPA will conduct market development studies for different commodities, will examine economic and regulatory incentives for using secondary or recycled materials, and will foster the formation of regional marketing councils for the exchange of market information. A National Recycling Council will be formed with members from all sectors of waste management to track recycling issues and problems and to recommend actions. Finally, EPA will study how to foster the recycling of lead-acid batteries, including examining the current incentives and disincentives associated with liability. Today's proposed guidelines, which prevent the combustion of lead-acid batteries will encourage their recycle. Also, in keeping with the "Agenda for Action," industry should step up its efforts in fostering the recycling of plastics and paper. State and local governments should encourage separation of recyclable materials, conduct waste exchanges, and provide incentives for stable markets for recycled goods.

During the development of this proposed rule, EPA contacted members of the MWC industry, State and local government organizations, and the environmental community in an effort to obtain their views and ideas regarding materials separation requirements as part of best demonstrated technology under section 111. By today's action, the Agency is affirming its current position that materials separation is part of best demonstrated technology. However, during these discussions, a number of ideas and suggestions were discussed with respect to alternative approaches and strategies for incorporating materials separation as best



demonstrated technology which the Agency wishes to discuss in an interactive policy forum. This forum will be scheduled to take place in early February 1990 during the public comment period for today's proposed rulemaking. The Agency anticipates that this forum will result in a series of suggestions and recommendations for Agency consideration during the development of the final rule.

While today's proposed materials separation guidelines apply only to MSW being combusted in MWC's, as other related Federal standards or guidelines are developed, the appropriateness of including materials separation provisions will be considered.

The EPA requests comments or recommendations on other actions that could be initiated by EPA to promote recycling and source reduction through the EPA's regulatory programs for MWC's.

#### H. Compliance Provisions

##### Methodology Overview

A number of alternative compliance methods were considered in developing the methods for determining compliance with the materials separation provisions. As proposed, compliance with the percent reduction requirement would be determined by comparing the amount of material recovered with the amount of incoming waste. The MWC would be required to weigh all MSW received and combusted and to weigh the materials separated for recovery, and keep monthly records. At the end of each calendar year (January through December), the annual average percent reduction of MSW (by weight) would be calculated from the monthly totals. The weights of vehicle and household batteries separated would also be recorded. The monthly recordkeeping and annual calculations to demonstrate compliance were determined to be reasonable because this approach would provide assurance that the separation provisions continue to be met on an ongoing basis. Furthermore, centralized MSW processing facilities and communities that are currently practicing separation generally keep such records. Therefore, the added reporting and recordkeeping burden of the proposal would be minimal. The alternative of not including an annual compliance demonstration in the guidelines was considered, but not selected for proposal.

In calculating compliance with the 25 percent or greater MSW weight reduction, a maximum credit of 10 percent would be given for yard waste

separation, even if the separated yard waste weighs more than 10 percent of the weight of the MSW. The remainder of the required 25 percent MSW reduction would have to be achieved by separation of one or more of the other specified materials.

In calculating the weight of ferrous metals separated, white goods such as stoves, refrigerators, and air conditioners could be included; however, whole automobiles and other vehicles could not be included. Additionally, in calculating the weight of MSW received and combusted and the weight of separated materials, construction and demolition wastes would not be included.

See section I, "Reporting and Recordkeeping" for information on the schedules for compliance demonstration. Also, see "Materials Separation—Combustion Permit" in this section for a discussion of combustion permit provisions.

##### Materials Separation Plan

A description of the separation procedures (whether on-site or off-site) would be submitted with the initial demonstration of compliance. Off-site materials separation programs will generally be more complex to monitor than on-site programs.

If an off-site source reduction or separation program is used to comply in whole or in part with the materials separation requirements, the adequacy of the separation program and associated reporting procedures would be reviewed for approval on a site-specific basis. The off-site plan should provide a specific description of the program, including program elements related to the control of MSW flow, legal requirements and sanctions, and recordkeeping.

The plan should include a description of all procedures used to ensure control of the MSW flow. The following topics should be addressed, as applicable:

- The boundaries of the MSW service area(s) and any portions of the area(s) for which the MSW is delivered to landfills;
- The ownership of waste from the time it is deposited at curbside to the time it is delivered to the MWC, landfill, materials recovery facility, recycling facility, or other treatment or disposal facility;
- Materials separation methods and destination of the MSW and each separated material (e.g., materials recovery or recycling facility, broker, MWC, landfill);
- Contractual arrangements, if applicable, between the MWC and the off-site party responsible for separation,

and contractual arrangements between other involved parties, such as contracts between municipalities and private haulers of MSW;

- Any economic incentives for household participation in separation such as deposit/return systems on beverage bottles and cans or on batteries;
- Any economic incentives for active MSW hauler participation in the separation program (e.g., differential fees for curbside deposit of waste at a recycling center versus an MWC);
- Any curbside separation requirements; and
- Provisions for separate collection of recoverable materials, and collection schedules (e.g., schedules for separate curbside collection of yard waste, glass, cans, white goods, etc.; location of community bins for drop-off of such materials).

The plan should also describe any legal requirements or sanctions that may be part of the off-site separation program. For example, copies of any local or State regulations requiring homeowners to separate yard wastes or other specified recoverable materials should be included. Copies of legislation (e.g., bottle bills) instituting deposit/return systems should also be included. Any penalties or sanctions for not following separation program requirements that can be applied to residences, private waste haulers, or other parties should be described.

The plan should also specify method(s) of demonstrating compliance with the materials separation provisions in the guidelines and should describe recordkeeping procedures. The following topics should be addressed as applicable:

- Method(s) for determining the amount (by weight) of the recoverable materials specified in the guidelines, vehicle batteries, and/or household batteries (as applicable) that are separated on a monthly and annual average basis. Methods could include actual measurements using scales or calculational procedures;
- Method(s) for determining the amount (by weight) of MSW combusted (excluding construction and demolition waste) on a monthly and annual average basis. Methods could include actual measurement using scales or calculational procedures;
- Location(s) where weight determinations are made and which party is responsible (e.g., MWC, off-site materials separation facility, transfer station, recycling facility, landfill);
- Recordkeeping procedures including type and frequency of information



recorded, who is responsible for keeping records, location of records;

- Auditing procedures and frequency of audits; and
- Schedule and procedures for reporting monthly and annual weights of separated materials and other information to the MWC and the State regulatory agency or EPA.

#### Contractual Arrangements

In addition to developing a separation plan and submitting annual demonstrations of compliance, the proposed guidelines also allow the MWC owner or operator to enter into a contract with the governing body of any community or any other party whose action is required to maintain compliance.

Under section 111 of the CAA, the owner or operator, which in the case of today's proposed guidelines is the owner or operator of the MWC, is responsible for demonstrating compliance with the guidelines. As discussed previously, in some cases, the owner or operator of the MWC may depend on another party to comply with some or all of the materials separation requirements at an "off-site" location. This does not prevent the owner or operator of the MWC from demonstrating compliance with these requirements by obtaining the necessary records from the off-site separator which show the weight of materials separated from the MSW and either the weight of MSW received by the off-site separator or the weight of processed MSW shipped by the off-site separator to the MWC. By this means, the owner or operator of the MWC can monitor compliance with the materials separation requirements and based on this information take whatever steps are necessary to ensure continued compliance with these requirements. It does, however, make it more difficult and impose an additional administrative burden on the owner or operator of the MWC than if compliance with the materials separation requirements is achieved "on-site" at the MWC.

To minimize this administrative burden on the owner or operator of the MWC, in cases where the owner or operator of the MWC is depending on another party to demonstrate compliance with some or all of the materials separation requirements, today's proposal includes provisions and would allow other parties responsible for materials separation to become "co-operators" with the owner or operator of the MWC for purposes of demonstrating compliance with the materials separation requirements. These provisions apply only to the materials separation requirements and

do not apply to other requirements or emission limits in today's guidelines. In addition, these provisions do not require parties performing off-site separation to enter into this relationship, they only provide the opportunity for this relationship where desired by both the owner or operator of the MWC and the other party performing off-site separation.

#### Materials Separation—Combustion Permit

The EPA is also proposing that best demonstrated technology for combustible MSW or RDF include a combustion permit for some of the separated materials under limited circumstances. In cases where a recycling market is shown to be unavailable for the separated combustible material, and the owner or operator of the MWC cannot recover or recycle other materials in the MSW or RDF, an application could be made for a combustion permit. A recycling market would be considered to be unavailable if, after separating the combustible material and searching for 120 days, an owner or operator could demonstrate either that no recycler will accept the material, or that the price the recycler is charging (including transportation costs) is equal to or exceeds the cost of landfilling (including transportation costs). The materials separation requirement would remain in force whether or not a combustion permit was granted. That is, materials would be separated whether or not a combustion permit were issued. For the material(s) covered by the combustion permit, records would be maintained of the amount of material(s) separated (prior to combustion), and that would be the amount of separated (and combusted) material(s) credited toward the overall 25 percent MSW reduction requirement contained in the definition of "processed MSW" in the guideline. The amount of other separated materials (not covered by the combustion permit) would have to be sufficient in combination with the separated (combusted) materials to achieve the overall 25 percent MSW reduction requirement (annual average). The combustion permit could be granted for a maximum of 1 year (without prejudice to filing petitions at later dates if recycling markets for combustibles continue to be unavailable).

The reason for this part of the proposal is that a large part of the reason EPA considers materials separation to be part of best demonstrated technology is to obtain environmental benefits from actually recycling the separated materials. If separated combustible materials

actually prove to be unrecyclable after the owner or operator spends reasonable time and efforts to find a recycling market and the materials separation requirement cannot be satisfied by separating other materials, then the nonair environmental benefits from separating the material would no longer be demonstrated. Under such circumstances, it would not make sense to continue to preclude combustion of the separated materials, and to force their landfilling. The EPA believes it is preferable to burn the combustible materials in an MWC than to landfill them. Not only is landfilling a disfavored waste management option (see RCRA section 1002(b)(8)), but it is sound policy to recover the energy value of the combustibles rather than burying them (see CAA section 111(a)(1)(C) and RCRA section 1002(c)(1)). (The same is not necessarily true for noncombustible recoverables. If these are burned, the incinerator ash will contain the metals and other noncombustibles which will end up being land disposed in any case. This is why the proposal is limited only to combustible recoverables.)

The Agency is proposing that the test for unavailability of a recycling market for a particular material turn on a comparison of the cost of landfilling versus the cost of recycling. This test appears to be the relevant comparison because once combustion is precluded, these are the two principal management options for the separated material. If a material can be recycled for less expense than landfilling, it would be economically rational (as well as environmentally preferable) to recycle the material, even if the recycler has to be paid to take the material.

The EPA is also proposing that the owner or operator would demonstrate that recycling markets are unavailable. This demonstration would include documentation of the recyclers that the owner or operator of the MWC has contacted, and a documentation of the costs of recycling versus the costs of landfilling. The EPA is proposing that a market be unavailable for at least 120 days before an exception from the separation requirements could be considered because market fluctuations can be a short-term phenomenon and because owners or operators appear to be able to store combustibles for greater than this amount of time while seeking recycling markets. A petition would be approved by the State before the combustibles could be burned and the duration of the exception would not exceed 1 year. (If markets continue to be unavailable after 1 year, another petition could be made.) Both of these



conditions appear necessary to EPA to ensure maximum effort to comply with the materials separation requirement and to actually recycle separated combustible materials.

Permits may be renewed for an additional year if the Regional Administrator determines it is appropriate and the conditions specified in § 60.56a(h)(1) continue to be met.

Comments are also specifically solicited on whether, under certain circumstances, the requirement to separate materials for which a combustion permit has been granted under 40 CFR § 60.56a(h) should be dropped. The Agency specifically solicits comments on what criteria could be used to determine whether a source or community would not have to separate materials for which they receive a permit to burn the waste.

The following example illustrates how EPA envisions the exception would operate:

A community operating an MWC separates newspapers from the MSW burned in its MWC. During a 4-month period, the community is unable to recycle the newspapers because the best arrangement they can make involves paying a recycler \$40 per ton to take the newspapers (including transportation cost). (Other recyclers will not take the newspapers for any price.) The cost of landfilling the newspapers is \$30 per ton (including transportation cost). Newspapers comprise 8 percent of the materials that are separated from the MSW and the community can demonstrate that it is unable to separate 8 percent of recoverables other than newspapers (in order to achieve an overall 25 percent materials separation). Under these circumstances, the State agency could grant the combustion permit for newspaper for up to 1 year. Upon grant of the permit, the MWC could burn newspapers and would achieve credit for the newspaper separation based on the weight of newspaper separated, just as if they had been recycled.

#### Enforcement Guidance

Following adoption of standards or guidelines, the Agency frequently develops enforcement guidance for use in enforcement actions to ensure consistent and uniform enforcement of the standards or guidelines. This enforcement guidance outlines the steps the Agency will likely follow, depending on the merits of the situation in question, in taking enforcement actions when violations of the guidelines and associated State standards occur. In this enforcement guidance, the Agency balances the seriousness of the violation

against the potential impacts associated with various remedies. Thus, in the case of today's proposed guidelines, the Agency would consider the impacts of any remedy to a violation on waste management in a community, particularly the potential for waste not to be collected or to be diverted to a less desirable disposal alternative than combustion.

One of the primary objectives of an enforcement action is to prevent further noncompliance, and this is often achieved by negotiating a settlement agreement with the noncomplying source that ensures that the source will come into compliance with the State standards developed pursuant of the EPA's guidelines. In the case of today's proposed guidelines, this could involve working with the owners or operators of the source to identify those actions necessary to achieve compliance and the time required to implement such actions.

If, as an example, the owner or operator of the MWC failed to comply with the materials separation requirements in today's guidelines and associated State standards, and the owner or operator is dependent on another party to provide processed waste, a review of the reason for noncompliance may indicate that the materials separation system utilized by this other party needs to be altered in some manner to ensure achieving the 25 percent separation requirement. This could necessitate installation of additional separation equipment or changes in local waste management practices, such as purchase of additional trucks and hiring of additional personnel for waste collection, or the adoption of local ordinances with financial incentives or fines to ensure more intensive curbside separation efforts.

Such changes would require time to implement. One remedy to a violation of the materials separation requirements might well be a consent agreement between the enforcement agency and the owner or operator of the MWC and/or other party responsible for separation, where the other party has agreed to be a co-operator for purposes of compliance with the materials separation requirements. The consent decree might permit the MWC to burn unprocessed waste for a limited period of time if the necessary additional equipment or changes to the waste management system are made to ensure compliance with the materials separation requirements at the end of a specified period of time.

Of course, in cases of continued and repeated noncompliance, enforcement actions seeking shutdown of the MWC

may be taken. In any event, the Agency solicits comments on enforcement guidance that might be developed following promulgation of today's guidelines and on possible remedies that might be sought in response to various violations.

#### I. Reporting and Recordkeeping Guidelines

At the time of submittal of the initial compliance demonstration for materials separation (i.e., at the end of calendar year 1994), an MWC facility would be required to submit a description of the procedures for separating materials for recovery to achieve the overall MSW reduction requirement and a description of the procedures for ensuring that lead-acid vehicle batteries would not be combusted at the designated facility. The facility would also submit a description of the collection program for household batteries. If an off-site separation program is used, the plan describing the program and compliance methods would be submitted for approval at the time of submittal of the initial compliance demonstration.

The proposed guidelines would require all designated facilities to submit annual compliance reports to show the overall percent reduction of MSW achieved by separation of the specific materials. The annual percent reduction would be calculated for each calendar year (January through December) from the monthly total weight of MSW received and the weight of materials separated for recovery each month, including any credits for a community source reduction or separation program. The first annual report submitted at the end of calendar year 1993 would not be used to determine compliance with the materials separation requirements, but would be used to review progress made toward the materials separation requirements. The initial compliance demonstration with the materials separation requirements would not be calculated and reported until the end of calendar year 1994. The annual percentage MSW reduction would be calculated and reported at the end of all following years.

The proposed guidelines would also require that certain types of records be maintained, beginning in January 1993. Records to be maintained include: the amount (by weight) of MSW received on a monthly basis at the designated facility; the amount (by weight) of MSW combusted on a monthly basis in the designated facility; the amount of materials (by type and weight) on a monthly basis that is separated for



recovery; the amounts (by weight) of vehicle batteries and household batteries on a monthly basis that are separated for recovery; the estimated amount (by type and weight) of materials reduced or separated for recovery on a monthly basis through an off-site or community source reduction or materials separation (recycling) program; and the calculations of the annual average percentage reduction in MSW achieved for each calendar year (January through December).

#### *J. Solicitation of Comments on Materials Separation Guidelines*

The EPA welcomes comments on all aspects of the proposed materials separation provisions, and has specifically identified several topics on which comments and information are requested.

First, the Agency solicits comments on the proposed 25 percent materials reduction level and associated air emission and other environmental benefits expected to result from materials separation. The EPA requests information on potential separation techniques and on whether a higher or lower percent reduction is more reasonable.

In particular, during development of the proposed guidelines, it was suggested by some that 15 percent MSW reduction would be more reasonable, however others have suggested that 40 percent would be preferable. Those who support a lower percent reduction (e.g., 15 percent) should provide information on specific difficulties in achieving the 25 percent reduction as defined in the proposal, and describe their basis for stating that 15 percent (or some other number) is more reasonable than 25 percent. Those supporting a higher percent reduction (e.g., 40 percent) should provide specific information showing the 40 percent (or another number above 25 percent) is achievable using demonstrated technologies, and is reasonable.

Comments are requested on the proposed prohibition on combustion of vehicle batteries and the plan to remove household batteries, and the practicality of on-site or off-site separation programs for battery removal.

The EPA is aware that different areas have different MSW disposal problems. Accordingly, comments are solicited on the following questions. Should the 25 percent MSW reduction be uniformly applied to all areas of the country, or should there be different requirements for urban areas, residential areas, metropolitan areas, and rural areas? Should the stringency of the materials separation requirements vary for

different MWC's depending on the type of area, but still be designed to achieve an overall 25 percent reduction on a national basis? How would the areas be defined?

Another approach to separation that was considered, but not selected for proposal, was specification of a percent reduction (by weight) for each individual recoverable material in MSW (e.g., a certain percent of the paper in MSW must be separated for recovery, a certain percent of ferrous metals, etc.). For reasons stated previously, the overall 25 percent weight reduction was chosen for proposal. However, comments are requested on the material-specific percent reduction approach. Commenters should include the reasons they favor or do not favor this approach, and submit information on the percent separation achievable for specific materials. Supporters of a material-specific percent reduction approach are also asked to suggest methods of demonstrating compliance. It would be more difficult to demonstrate compliance with material-specific percent reductions because the weight of each material (e.g., paper, plastics, etc.) in the unseparated MSW would need to be known in order to determine the percent of the material that was separated. The content of unprocessed MSW is variable depending on factors such as climate, type and number of residences, and type and number of commercial businesses that produce MSW in the community. There is also seasonal variation in MSW content. Commenters should address how the owner or operator of the MWC could determine the weight of each specific material in the unprocessed MSW.

The Agency further solicits comments on whether other types of materials should be included in the list of recoverable materials that can be separated. The Agency is aware of arguments that recovering and stockpiling recovered materials, such as batteries, may create a separate environmental hazard.

The Agency is aware of arguments that separation and recovery of materials from the MSW stream may result in the landfilling of some separated materials, and could potentially increase the amount of waste disposed of in landfills. The Agency is also aware, however, that once separated, there is an economic incentive to recycle the separated materials which ranges up to the cost of alternative disposal at a landfill. Since landfill costs are substantial, this economic incentive to recycle is also substantial. The Agency solicits comment on this issue. In particular, the

Agency is interested in receiving comments concerning the relative multimedia environmental impacts of MSW disposal by landfilling versus combustion.

Suggestions are also requested on ways to implement the materials separation guidelines to minimize the burden for MWC owners or operators and the communities they serve. For example, what compliance schedule is most reasonable? (An alternative approach that would phase in separation requirements is discussed in the next section.)

There are several implementation issues associated with off-site separation programs. The proposed guidelines would allow off-site source reduction or source separation programs to be used to comply, in whole or in part, with the materials separation requirements. For example, if the MWC service area collected yard waste, paper, glass, aluminum cans, and/or other materials separately and did not combust these collected materials, credit toward the 25 percent MSW reduction would be given. The prohibition on combustion of lead-acid vehicle batteries could also be achieved through off-site programs. In these cases, MWC's would be required to submit a plan describing the community program and the means of verifying compliance. Section H describes the type of information that should be included in such plans. Comment is requested on how to structure such plans, how to determine compliance where community programs are used, what type of measurement methods could be used, and what types of records should be kept. Comments are specifically requested on how to give credit for source reduction programs (e.g., where commercial businesses or households reduce the amount of waste generated) and for backyard composting of yard waste at the household level.

Finally, EPA requests comments concerning the contractual provisions previously discussed in Section H. The proposed guidelines allow the MWC and parties performing off-site separation to enter into a contractual agreement designating the party performing off-site separation as a co-operator of the MWC regarding compliance with the materials separation requirements. In this way, where off-site materials separation programs are used, enforcement actions for noncompliance with the materials separation provisions could be taken against the off-site MSW processor responsible for the violation. The EPA requests comment on the feasibility of



such contract provisions, and on other approaches for the enforcement of materials separation provisions.

#### *K. Solicitation of Comments on Alternative Phase-in of Materials Separation Guidelines*

The "Agenda for Action" requires a 25 percent MSW reduction through source reduction and recycling by 1992, but also calls for increasing the percent reduction level to higher levels after 1992. The proposed MWC guidelines would also establish a 25 percent reduction level. However, greater percent removals may be achievable. As markets for separated materials strengthen and expand, higher percent separation levels will become more feasible technically and economically. The Agency solicits comments on whether materials separation guidelines for MWC's should require phasing-in of more stringent requirements over time.

One alternative that was considered and rejected was a three-step phase-in of the materials separation requirements. This approach would be similar to the proposed guidelines in that all MWC's would be prohibited from combusting MSW unless the MSW had been processed to separate materials for recovery achieving a specified percent overall reduction (by weight) of the MSW. However, the percent reduction of MSW would be less than 25 percent through 1992; after 1992 it would be 25 percent, consistent with the "Agenda for Action," and after some later date (e.g., 1995) a higher percent reduction (e.g., 40 percent) would be required. After consideration, it was determined that there is no need to specify a reduction level lower than 25 percent prior to 1992. If these emission guidelines are promulgated in December 1990, as currently scheduled, it is expected that State plans would be submitted within 9 months (by September 1991). Retrofit of materials separation systems could begin in 1991, but would probably not be complete until 1992. Thus, specifying a different percent reduction before 1992 would be of little use.

The proposed guidelines, therefore, start with the requirement for a 25 percent reduction of MSW. The Agency requests comments on whether the guidelines should become effective at a different date from the 1992 proposed, and on whether higher performance levels should be established in subsequent years and if they should be phased-in with one or two steps. Specifically, comments are requested on the desirability of increasing the 25 percent separation level to 40 percent by December 1995.

#### *L. Spokane and Huntington Remands*

The Administrator has recently denied two appeals involving (in part) the issue of whether materials separation is part of the best available control technology (BACT) in the prevention of significant deterioration (PSD) permits issued to MWC's. Spokane Regional Waste-to-Energy Project, PSD Appeal No. 88-12 (June 9, 1989) and Huntington Mass-Burn Incinerator, PSD Appeal No. 89-2 (August 2, 1989). The EPA denied both appeals, concluding that the petitioners had failed to show that materials separation was part of BACT for the facilities at issue.

The EPA does not view these petition denials as precluding inclusion of materials separation as part of the Section 111 NSPS and guidelines for existing sources. In the first place, all that was at issue in these appeals was whether petitioners had met their burden of showing that the PSD permit determination not to include a separation requirement was clearly erroneous. Spokane Appeal at p. 3. The EPA is under no such burden in the present rulemaking. Further points of distinction are that the Agency was not asked to review the relation of materials separation to all MWC emissions and thus did not consider certain types of pollutant emission reductions (for example, petitioners made no specific assertions regarding the overall life cycle benefits of materials separation, and also did not consider the nonair quality environmental benefits of materials separation in detail, an important factor in making section 111 determinations). Furthermore, although BACT determinations can have national precedential effect, EPA believes that a proposed decision of national import to require MWC's to perform materials separation can be more appropriately made in the context of a national rulemaking even if the Administrator declines to do so in deciding an individual PSD appeal.

The Administrator further stated that in denying these appeals that petitioners had failed to show that materials separation technologies were "available" (within the meaning of the definition of BACT contained in section 169(3) of the CAA) for MWC's because petitioners had failed to show that use of materials separation in combination with other air pollution control technology would lead to a demonstrable reduction in emissions of regulated pollutants. Spokane Appeal at p. 22. The EPA has included as part of the record of this proposed rulemaking a series of studies (most of which were

not presented to EPA by petitioners in the respective PSD appeals) showing reduction in emissions of MWC emissions through use of materials separation. Although these studies do not deal with situations where materials separation was used along with the best demonstrated technology-type of air pollution control technology, it is the Agency's engineering judgment that a reduction of pollutant input into an MWC will result in the MWC emitting fewer of these pollutants. Given that separation technologies are demonstrated for all of the types of materials considered in today's guidelines, that materials separation results in documented reduction in MWC emissions regulated under the proposal, and the Agency's judgment that these reductions would continue even if the MWC is also equipped with at-the-stack air pollution control technology, the Agency believes that materials separation is a demonstrated technology for existing MWC's under section 111.

#### **VI. Combined Impacts of the Proposed Guidelines**

The impacts of the proposed municipal waste combustor (MWC) emissions guidelines (based on good combustion practices [GCP] and particulate matter [PM] or acid gas/PM control systems), and the proposed materials separation guidelines are additive. The combined national emission impacts of these two types of guidelines are summarized in table 13.

TABLE 13.—COMBINED NATIONAL EMISSION REDUCTIONS FOR THE SELECTED REGULATORY ALTERNATIVE

Pollutant	Annual total emission reduction
MWC emissions	
MWC organics:	
Dioxins/Furans .....	190 kg/yr
MWC metals:	
PM .....	8,300 Mg/yr
MWC acid gases:	
SO <sub>2</sub> .....	37,000 Mg/yr
HCl .....	86,000 Mg/yr
Materials separation	Additional reductions in MWC emissions

As shown in Table 14, the combined national total annualized cost for the two proposed guidelines would be about \$320 million/year, and the combined unit cost would be about \$10.90/Mg (\$9.90/ton) of municipal solid waste (MSW) combusted.

As discussed in section V, in most cases the materials separation guidelines would not result in increased



waste disposal costs, and, therefore, no severe economic impacts on households or government units are anticipated. In some cases the materials separation guidelines would result in net benefits (reduced costs) for households and government units.

TABLE 14.—COMBINED NATIONAL CONTROL COSTS FOR THE SELECTED REGULATORY ALTERNATIVE

Guideline	Total annualized cost (\$10 <sup>6</sup> /yr)	Annualized cost per Mg MSW (\$/Mg)
MWC emissions.....	320	10.90
Materials separation.....	0	0
Combined total.....	320	10.90

## VII. Considerations for Prevention of Significant Deterioration

Today's rulemaking under section 111(d) would establish a new classification of pollutants subject to regulation under the Act: "MWC emissions." The components of MWC emissions are MWC metals, MWC organics, and MWC acid gases. A consequence of this action is that prevention of significant deterioration (PSD) rules will now apply to all subject major stationary sources that have significant increases in this pollutant. Absent any significance levels in the regulations to exempt *de minimis* emission increases, review of PSD would be triggered by an increase in MWC emissions (see, e.g., 40 CFR 52.21(b)(23)(ii)).

In order to maintain a manageable review process which focuses resources on environmental priorities, EPA is proposing in today's Federal Register significance thresholds for these pollutants in a manner similar to those promulgated on August 7, 1980, for other regulated pollutants. At that time, EPA established emissions thresholds, expressed in tons per year, below which emissions would be considered *de minimis* and not be made subject to review. The Agency established these thresholds for 15 pollutants—the six criteria pollutants plus the four pollutants addressed at that time by national emission standards for hazardous air pollutants (NESHAP) and the five addressed in the new source performance standards (NSPS) (see, e.g., 40 CFR 52.21(b)(23)(i)).

The current significance levels were established in 1980 as simple indicators of what emission levels could appropriately be considered *de minimis*. These emission levels have proven to be reasonable in implementing the PSD

program. For noncriteria pollutants, the significance numbers were based on a percentage of the emissions of a well-controlled facility of modest size. For NESHAP pollutants, this level was 10 percent of allowable emissions from the subject facility; for NSPS, it was 20 percent. Projected impacts from emissions at this rate were compared to available health and welfare data to assure avoiding appreciable adverse effects.

For the purpose of establishing what amount of MWC emissions would be significant, a 225 Mg/day (250 tons/day) capacity MWC plant was evaluated. This capacity level was chosen since it is typical of many of the moderately sized MWC plants and represents that threshold capacity where a 90 Mg/year (100 tons/year) emission rate would qualify an MWC plant as being major under PSD. An MWC of this size typically would have the potential after controls to emit 90 Mg/year (100 tons/year) of MWC emissions. Because MWC emissions have carcinogenic components, EPA believes that a significance threshold of no higher than 10 percent of that emission rate is appropriate. Thus, the Agency proposes a significance emission level of 9 Mg/year (10 tons/year) of MWC emissions as a trigger for PSD review.

The August 1980 Federal Register also provided exemptions from the otherwise required PSD air quality monitoring data analyses for these sources which could demonstrate that their maximum expected air quality impact could be less than the values indicated in, e.g., 40 CFR 52.21(i)(8)(i) (45 FR 52676, 52709). Those air quality values were generally set at levels reflecting five times the lowest detectable ambient concentrations that could be measured by available monitoring equipment. The MWC emissions being regulated today present a somewhat different situation in that no ambient monitoring methods exist to measure these MWC-specific classifications of pollutants. For this reason, the Administrator will not at this time require PSD permit applicants to monitor specifically for MWC emissions. Applicants for MWC permits will, of course, continue to be responsible for performing appropriate monitoring for other regulated pollutants.

The EPA recognizes that the determination of significance thresholds for review of increases in MWC emissions is important. Comment on the proposed threshold and the approach to defining it is therefore solicited and will be carefully reviewed.

In addition to those PSD concerns related to the newly regulated

pollutants, the Agency is aware of other potential PSD issues caused by the Section 111(d) guidelines. More specifically, it is possible that the installation of pollution controls to comply with the guideline levels of performance may trigger PSD review. For example, installing and operating combustion-related controls to reduce emissions of dioxins and furans could result in a physical change or a change in the method of operation at the MWC plant and may increase NO<sub>x</sub> emissions in significant amounts, thereby resulting in a major modification for PSD purposes. Similarly, the addition of controls might subject a complying MWC to PSD review where the new potential emissions of the MWC would be significantly larger in amount than the actual emissions of the MWC prior to section 111(d) compliance.

The EPA in general does not believe that the intent of Congress in Part C of the Act was to have sources that are attempting to comply with Section 111(d) requirements trigger PSD review. As such, the Agency solicits comments on whether and to what extent a source should trigger PSD by installing and operating emission reduction systems for the purpose of achieving the guideline limits of performance. Comments on this issue should provide useful input to the Administrator in deciding whether to modify the current PSD rules and to resolve this issue.

## VIII. Administrative Requirements

### A. Public Hearing

Three public hearings are planned. Each will discuss the proposed guidelines in accordance with section 307(d)(5) of the Clean Air Act (CAA). Persons wishing to make oral presentations should contact EPA at the address given in the ADDRESSES section of this preamble. Oral presentations should be limited to 15 minutes each. Any member of the public may file a written statement before, during, or within 30 days after the hearings. Written statements should be mailed to the Air Docket Section at the address given in the ADDRESSES section of this preamble.

A verbatim transcript of the hearings and written statements will be available for public inspection and copying during normal working hours at the EPA's Air Docket Section in Washington, DC (see ADDRESSES section of this preamble).

### B. Docket

The docket is an organized and complete file of all the information



submitted to or otherwise considered in the development of this proposed rulemaking. The principal purposes of the docket are: (1) to allow interested parties to identify and locate documents so that they can effectively participate in the rulemaking process, and (2) to serve as the record in case of judicial review (except for interagency review materials [Section 307(d)(7)(A)]). The docket number for this rulemaking is A-89-08.

#### C. Clean Air Act Procedural Requirements

1. Administrator Listing—section 111. As prescribed by Section 111 of the CAA, as amended, establishment of emission guidelines for MWC's is based on the Administrator's determination (52 FR 25399, dated July 7, 1987) that these sources contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare.

2. Periodic Review—section 111. The guidelines will be reviewed 4 years from the date of promulgation as required by the CAA. This review will include an assessment of such factors as the need for integration with other programs, the existence of alternative methods, enforceability, improvements in emission control technology, and reporting requirements.

3. External Participation—section 117. In accordance with Section 117 of the CAA, publication of this proposal was preceded by consultation with appropriate advisory committees, independent experts, and Federal departments and agencies. The Administrator will welcome comments on all aspects of the proposed guidelines, including economic and technological issues.

4. Economic Impact Assessment—section 317. Section 317 of the CAA requires the Administrator to prepare an economic impact assessment for any emission guidelines promulgated under section 111(d) of the Act. An economic impact assessment was prepared for the proposed guidelines and for other regulatory alternatives. All aspects of the assessment were considered in the formulation of the proposed guidelines to ensure that the proposed guidelines would represent the best system of emission reduction considering costs. Portions of the economic impact assessment are included in the background information documents (BID's) and additional information is included in the docket.

#### List of Subjects in 40 CFR Part 60

Air pollution control, Incorporation by reference, Intergovernmental relations,

Reporting and recordkeeping, Municipal waste combustors, Municipal solid waste.

Dated: November 30, 1989.

William K. Reilly,  
Administrator.

#### PART 60—GUIDELINES AND COMPLIANCE TIMES FOR EXISTING STATIONARY SOURCES

For the reasons set out in the preamble, title 40, chapter I, of the Code of Federal Regulations is proposed to be amended as follows:

1. The authority citation for part 60 continues to read as follows:

Authority: 42 U.S.C. 7401, 7411, 7414, 7416 and 7601.

2. Subpart C of part 60 is amended by revising § 60.30 to read as follows:

##### § 60.30 Scope.

The following subparts contain emission guidelines and compliance times for the control of certain designated pollutants in accordance with section 111(d) of the Act and subpart B.

(a) Subpart Ca—Municipal Waste Combustors.

(b) Subpart Cb—Sulfuric Acid Production Plants.

3. Part 60 is further amended by adding subpart Ca to read as follows:

##### Subpart Ca—Emissions Guidelines and Compliance Times for Municipal Waste Combustors

Sec.

60.30a Scope.

60.31a Definitions.

60.32a Designated facilities.

60.33a Emission guidelines for MWC metals.

60.34a Emission guidelines for MWC organics.

60.35a Emission guidelines for MWC acid gases.

60.36a Emission guidelines for MWC operating practices.

60.37a MWC operator certification and training.

60.38a Compliance and performance testing and compliance times.

60.39a Reporting and recordkeeping guidelines.

##### Subpart Ca—Emissions Guidelines and Compliance Times for Municipal Waste Combustors

##### § 60.30a Scope.

This subpart contains emission guidelines and compliance times for the control of certain designated pollutants from certain municipal waste combustors (MWC's) in accordance with Section 111(d) of the Act and Subpart B.

##### § 60.31a Definitions.

Terms used but not defined in this subpart have the meaning given them in the Act and subparts A, B and Ea of this part.

"MWC plant" means one or more MWC units at the same location for which construction, modification, or reconstruction is commenced before December 20, 1989.

"MWC plant capacity" means the aggregate MWC unit capacity of all MWC units at an MWC plant for which construction, modification, or reconstruction is commenced before December 20, 1989.

"Regional MWC" means an MWC plant with an MWC plant capacity greater than 2,000 megagrams per day (2,200 tons per day) of MSW.

##### § 60.32a Designated facilities.

(a) The designated facility to which the guidelines apply is each MWC unit for which construction, modification, or reconstruction is commenced before December 20, 1989.

(b) Physical or operational changes made to an existing MWC unit to comply with an emission guideline are not considered a modification or reconstruction and would not bring an existing MWC unit under the provisions at subpart Ea [see § 60.50a(b)].

##### § 60.33a Emission guidelines for MWC metals.

For approval, a State plan shall include the emission guidelines for MWC metals listed below, except as provided for under § 60.24. The emission guidelines for MWC metals expressed as particulate matter contained in gases discharged to the atmosphere from any designated facility are as follows:

MWC plant capacity	Guideline emission level mg/dscm (gr/dscf)	Opacity (percent)
Regional .....	34 (0.015)	10 (6-min.)
Large .....	69 (0.030)	10 (6-min.)
Small .....	69 (0.030)	10 (6-min.)

Note: All emission levels corrected to 7 percent O<sub>2</sub>.

##### § 60.34a Emission guidelines for MWC organics.

For approval, a State plan shall include the emission guidelines for MWC organics listed below, except as provided for under § 60.24. The emission guidelines for the concentration of the dioxin/furan component of MWC organics discharged into the atmosphere from any designated facility are as follows:



MWC plant capacity	Guideline, ng/normal m <sup>3</sup>	Emission level (gr/billion dscf)
Regional (including regional RDF) .....	[5-30]	(12-123)
Large (except RDF) .....	125	(50)
Large RDF .....	250	(100)
Small (except RDF) .....	500	(200)
Small RDF .....	1,000	(400)

Note: All levels corrected to 7 percent O<sub>2</sub>.

#### § 60.35a Emission guidelines for MWC acid gases.

For approval, a State plan shall include the emission guidelines for MWC acid gases for MWC's located at large and regional MWC plants listed below, except as provided for under § 60.24. The emission guidelines for MWC acid gases expressed as sulfur dioxide and hydrogen chloride contained in gases discharged to the atmosphere from any designated facility are as follows:

MWC plant capacity	Guideline emission level (% reduction or ppmv)	
	SO <sub>2</sub>	HCl
Regional .....	85% or 30 ppmv	95% or 25 ppmv
Large .....	50% or 30 ppmv	50% or 25 ppmv

Note: All ppmv levels corrected to 7 percent O<sub>2</sub>.

Either the applicable percent reduction or the ppmv guideline, whichever is less stringent, is the guideline limit for a designated facility.

#### § 60.36a Emission guidelines for MWC operating practices.

For approval, a State plan shall include the requirements for MWC operating practices listed in § 60.56a of Subpart Ea including the materials separation requirement under § 60.56a, except as provided for under § 60.24.

#### § 60.37a MWC operator certification and training.

For approval, a State plan shall include the requirements listed in § 60.57a of Subpart Ea, except as provided for under § 60.24.

#### § 60.38a Compliance and performance testing and compliance times.

(a) For approval, a State plan shall include, for small, large, and regional MWC's, the compliance and performance testing methods listed in § 60.58a for small MWC plants, as applicable, except as provided for under § 60.24.

(b) Except as provided for under paragraph (c) of this section, planning, awarding of contracts, and installation

of equipment capable of attaining the level of the emission guidelines established under this subpart are expected to be accomplished within 36 months after the effective date of State emission standards for MWC units.

(c) Planning, awarding of contracts, and installation of equipment and procedures capable of attaining the level of materials separation specified in the emission guidelines under 60.36a are expected to be accomplished by no later than December 31, 1992. The initial demonstration of compliance with the materials separation provisions in § 60.36a is expected to be accomplished at the end of calendar year 1994.

#### § 60.39a Reporting and recordkeeping guidelines.

For approval, a State plan shall include the reporting and recordkeeping provisions listed in § 60.59a, as applicable, except as provided for under § 60.24.

4. Subpart C of part 60 is amended by removing §§ 60.32, 60.33, and 60.34; and Subpart Cb is added as follows:

#### Subpart Cb—Emission Guidelines and Compliance Times for Sulfuric Acid Production Units

##### § 60.30b Designated facilities.

(a) Sulfuric acids production units. The designated facility to which §§ 60.31b and 60.32b apply is each existing "sulfuric acid production unit" as defined in § 60.81(a) of subpart H.

##### § 60.31b Emission guidelines.

(a) Sulfuric acid production units. The emission guideline for designated facilities is 0.25 gram sulfuric acid mist (as measured by Method 8, of Appendix A) per kilogram of sulfuric acid produced (0.05 lb/ton), the production being expressed as 100 percent H<sub>2</sub>SO<sub>4</sub>.

##### 60.32b Compliance times.

(a) Sulfuric acid production units. Planning, awarding of contracts, and installation of equipment capable of attaining the level of the emission guideline established under § 60.33(a) can be accomplished within 17 months after the effective date of a State emission standard for sulfuric acid mist. [FR Doc. 89-28719 Filed 12-19-89; 6:45 am]

BILLING CODE 6560-50-M

#### 40 CFR Parts 51, 52, and 60

[AD-FRL-3646-1]

RIN 2060-AC26

#### Standards of Performance for New Stationary Sources; Municipal Waste Combustors

AGENCY: Environmental Protection Agency (EPA).

#### ACTION: Proposed rule and notice of public hearing.

**SUMMARY:** This proposal would add Subpart Ea to 40 CFR part 60. Subpart Ea would limit emissions from new, modified, and reconstructed municipal waste combustors (MWC's). The proposed standards implement Section 111(b) of the Clean Air Act (CAA) and are based on the Administrator's determinations that emissions from MWC's cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare. The intent of the proposed standards is to require new MWC's to control emissions to the level achievable by applying the best demonstrated system of continuous emission reduction, considering costs, nonair quality health and environmental impacts, and energy requirements.

These are proposed rather than final standards, and comments are requested. The EPA will consider all comments and new information received during the public comment period, and will make changes to the standards, where appropriate, based on these comments.

If requested, a public hearing will be held to provide interested parties an opportunity for oral presentations of data, views, or arguments concerning the proposed emission guidelines.

**DATES:** Comments must be received on or before March 1, 1990.

**Public Hearings.** Public hearings will be held in Boston, Massachusetts, on January 22 and 23, 1990; in Detroit, Michigan, on January 25 and 26, 1990; and in Seattle, Washington, on January 30 and 31, 1990. All hearings will start at 9:00 a.m. Persons wishing to present oral testimony at the public hearings must call Ms. Ann Eleanor at (919) 541-5578 before January 15, 1990, for the Boston hearing; January 18, 1990, for the Detroit hearing; and January 23, 1990, for the Seattle hearing. Each speaker will be allowed up to 10 minutes, and each group or organization will be allowed a maximum of 20 minutes to speak. If no one requests to speak at a hearing before these dates, the hearing may be cancelled. Persons interested in attending the hearings should also call Ms. Ann Eleanor at (919) 541-5578 to verify that a hearing will be held.

**ADDRESSES:** Comments. Comments should be submitted (in duplicate if possible) to: Air Docket (LE-131), Attention Docket No. A-89-08, Room M1500, U.S. Environmental Protection Agency, 401 M Street, SW., Washington DC 20460.



**Public Hearing.** The three scheduled public hearings, if requested, will be held at the following locations:

1. Presidents Ballroom, Hyatt Regency, 575 Memorial Drive, Cambridge, Massachusetts.
2. Cobo Hall, Cobo Convention Center, One Washington Boulevard, Detroit, Michigan.
3. Rainier Room, Seattle Center, 305 Harrison Street, Seattle, Washington.

Persons interested in attending a hearing or wishing to present oral testimony should notify Ms. Ann Eleanor, Standards Development Branch (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, telephone number (919) 541-5578.

**Background Information Documents.** The background information documents (BID's) for the proposed standards consist of seven documents. See **SUPPLEMENTARY INFORMATION** for a listing of these documents. Persons wishing to review the BID's should contact their respective trade, professional, or environmental organization.

**Docket.** Docket No. A-89-08, containing supporting information used in developing the proposed standards, is available for public inspection and copying between 8:30 a.m. and 3:30 p.m., Monday through Friday, at the EPA's Air Docket, Room M1500, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460. A reasonable fee may be charged for copying.

**FOR FURTHER INFORMATION CONTACT:** Mr. Walter Stevenson [(919) 541-5264] or Mr. Fred Porter [(919) 541-5251], Standards Development Branch, Emission Standards Division (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

**SUPPLEMENTARY INFORMATION:** The BID's for the proposed standards consist of seven documents as follows:

1. "Municipal Waste Combustors—Background Information for Proposed Standards: 111(b) Model Plant Description and Costs of Control", (EPA-450/3-89-27b, August 1989);
2. "Municipal Waste Combustors—Background Information for Proposed Standards: Post-Combustion Technology Performance", (EPA-450/3-89-27c, August 1989);
3. "Municipal Waste Combustion Assessment, Combustion Control at New Facilities", (EPA-600/8-89-057, August 1989);
4. "Municipal Waste Combustion Assessment, Technical Basis for Good Combustion Practice", (EPA-600/8-89-063, August 1989);
5. "Municipal Waste Combustors—Background Information for Proposed

Standards: Cost Procedures", (EPA-450/3-89-27a, August 1989);

6. "Economic Impact of Air Pollutant Emission Standards for New MWC's", (EPA-450/3-89-006, August 1989); and
7. "Municipal Waste Combustors—Background Information for Proposed Standards: Control of NO<sub>x</sub> Emissions", EPA-450/3-89-27d, August 1989.

These reports are being provided at no cost to the public through interested trade, professional, and environmental organizations upon request. However, because of the number and size of volumes involved and the associated printing and distribution costs, only a limited number of sets were printed. The reports are being provided to trade groups, and professional and environmental organizations, with the understanding that they will allow members access to their document sets. Persons wishing to review the BID's should contact their respective organization. If the organization does not have the BID's, a set will be provided to the organization for the use of their membership.

The following outline is provided to aid in locating information in the preamble to the proposed regulation.

#### I. Introduction

- A. Summary of Regulatory Decision
- B. New Source Performance Standards (NSPS)—General Goals
- C. NSPS Decision Summary
- D. Overview of This Preamble

#### II. Summary of the Standards

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- C. Rationale for Materials Separation Requirements
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- E. Legal Authority to Issue Materials Separation Standards for MWC's
- F. Cost Impacts of the Proposed Standards
- G. Overall Agency Strategy to Promote Municipal Solid Waste (MSW) Reduction and Recycling
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- J. Solicitation of Comments on Materials Separation Requirements
- K. Solicitation of Comments on Alternative Phase-in of Materials Separation Requirements
- L. Potential Alternative Approach for Requiring Materials Separation
- M. Spokane and Hunting Remands

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- A. Selection of NO<sub>x</sub>
- B. Selection of Best Demonstrated Technology for NO<sub>x</sub> Control
- C. Performance Testing and Monitoring Requirements for NO<sub>x</sub>
- D. Reporting and Recordkeeping for NO<sub>x</sub>

#### VII. Combined Impacts of the Proposed Standards

#### VIII. Miscellaneous

- A. Prevention of Significant Deterioration Considerations
  - B. Permitting Operational Guidance
- #### IX. Administrative Requirements
- A. Public Hearing
  - B. Docket
  - C. Clean Air Act Procedural Requirements
  - D. Office of Management and Budget Reviews
  - E. Regulatory Flexibility Act Compliance
  - F. List of Subjects in 40 CFR Part 60

#### I. Introduction

##### A. Summary of Regulatory Decision

Several studies were performed to determine whether municipal waste combustor (MWC) emissions should be regulated and, if so, under what sections of the Clean Air Act (CAA). As set forth in the advance notice of proposed rulemaking (ANPRM) (52 FR 25399, July 7, 1987), the Agency has decided to regulate air emissions from MWC's under section 111. This notice, therefore, proposes standards of performance for new MWC's under section 111(b) of the CAA. A separate regulatory action in today's Federal Register proposes emission guidelines for existing MWC's under section 111(d). Today's proposals address only air emissions from MWC's. The Agency has developed an overall agenda to address other municipal solid waste (MSW) disposal issues, and



today's air emission standards are just one component.

#### B. New Source Performance Standards (NSPS)—General Goals

New source performance standards (NSPS or "standards") implement section 111(b) of the CAA. New source performance standards are issued for categories of sources which cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare. They apply to new stationary sources of emissions, i.e., sources whose construction, modification, or reconstruction begins after a standard is proposed. An NSPS requires these sources to control emissions to the level achievable by "best demonstrated technology" considering costs and any nonair quality health and environmental impacts and energy requirements. The control technology used to achieve the standards is not specified. Only the emission limits achievable by the "best demonstrated technology" are included in the standards. Any control technology that will comply with the emission limits can be used.

#### C. NSPS Decision Summary

An NSPS is the end product of a series of decisions related to certain key elements for the source category being considered for regulation. The elements in this "decision" are generally the following:

1. Identification of source category to be regulated—usually an emission source category, but can be a process or group of processes within an industry.
2. Definition of affected facility—the piece or pieces of equipment that comprise the sources to which the standards apply.
3. Selection of pollutant(s) to be regulated—the particular substance(s) emitted by the affected facility that the standards control.
4. Identification of "best demonstrated technology"—the technology on which the standards will be based, i.e.,

... application of the best technological system of continuous emission reduction which (taking into consideration the cost of achieving such emission reduction, any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated. [Section 111(a)(1)]

5. Selection of format for the standards—the form in which the standards are expressed, i.e., as pollutant concentration emission limits, as a percent reduction in emissions, or as equipment or work practice standards.

6. Development of actual standards—generally emission limits based on what the best demonstrated technology can achieve. Only in unusual cases do standards require that a specific technology be used. In general, the source owner or operator may select any method for complying with the standards.

7. Other considerations—in addition to emission limits, NSPS usually include: standards for visible emissions, modification/reconstruction provisions, monitoring requirements, performance test methods and compliance procedures, and reporting and recordkeeping requirements.

#### D. Overview of This Preamble

This preamble will:

1. Summarize the important features of this proposed NSPS by discussing the conclusions reached with respect to each of the elements in the decision summary.
2. Describe the environmental, energy, and economic impacts of this NSPS.
3. Present a rationale for each of the decisions in the decision summary.
4. Present a regulatory flexibility analysis.
5. Discuss administrative requirements relevant to this action.

#### II. Summary of the Standards

##### A. Source Category To Be Regulated

The proposed standards would limit air emissions from new, modified, or

reconstructed municipal waste combustors (MWC's). Emission guidelines for existing MWC's are being proposed elsewhere in today's Federal Register. An MSW is defined as any combustion facility used for burning municipal solid waste (MWC). The MSW burned in the MWC's is refuse, more than 50 percent of which is waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible materials such as glass, metal, and rock. The MSW definition includes household wastes as well as municipal-type wastes from institutional, commercial, municipal, and some industrial sources, but does not include industrial process wastes, or medical wastes. The MSW also includes refuse-derived fuel (RDF), which is solid waste that is shredded and classified by size before combustion.

#### B. Pollutants To Be Regulated

Two pollutants would be regulated under the proposed standards: (1) "MWC emissions" and (2) nitrogen oxides (NO<sub>x</sub>). *MWC Emissions:* Constituents of MWC emissions represent a broad range of pollutants that can generally be categorized into three subclasses: MWC organics (including dioxins/furans), MWC metals (including trace metals which are condensable on particulate matter [PM]), and MWC acid gases (sulfur dioxide [SO<sub>2</sub>] and hydrogen chloride [HCl]). The composite pollutant, "MWC emissions", is designated for regulation under section 111(b) which applies to new sources (the subject of this notice). Under section 111(d), "MWC emissions" would be regulated at existing MWC's (emission guidelines). Emission guidelines proposed under section 111(d) are published in a separate notice in today's Federal Register. As shown in Table 1, the proposed standards would establish emission limits and operating standards to control MWC emissions.

TABLE 1.—SUMMARY OF REGULATED POLLUTANT AND STANDARDS

Pollutant regulated	Pollutant subclasses	Proposed standards
1. MWC Emissions ("designated" for control under Section 111)	MWC Organics	<ul style="list-style-type: none"> <li>• Dioxin/furan emission limit</li> <li>• Combustor operational standards:               <ul style="list-style-type: none"> <li>—CO Limit</li> <li>—Load</li> <li>—Flue Gas Temperature</li> <li>—MWC Operator Training</li> </ul> </li> </ul>
	MWC Metals	<ul style="list-style-type: none"> <li>• PM emission limit</li> <li>• Opacity limit</li> </ul>
	MWC Acid Gases	<ul style="list-style-type: none"> <li>• HCl emission limit</li> <li>• SO<sub>2</sub> emission limit</li> </ul>
2. NO <sub>x</sub> (criteria pollutant)	NO <sub>x</sub>	<ul style="list-style-type: none"> <li>• NO<sub>x</sub> emission limit</li> </ul>

\*Materials separation requirements are also proposed. These requirements would result in additional reduction of MWC emissions.



**NO<sub>x</sub> Emissions:** The second pollutant to be regulated under these proposed standards is NO<sub>x</sub>. Nitrogen oxide emissions would be regulated under Section 111(b). Consequently, as shown in Table 1, the proposed standards would establish an emission limit for NO<sub>x</sub> emissions from new MWC's.

#### C. Best Demonstrated Technology

**MWC Emissions:** The proposed standards for MWC's located at large MWC plants (those plants that have an aggregate capacity to combust greater than 225 megagrams/day [Mg/day] [250 tons/day] of MSW) are based on the conclusion that the best demonstrated technology for reducing MWC emissions includes: good combustion practices (GCP) for MWC organics control and a spray dryer (SD) followed by a fabric filter (FF) to achieve additional control of MWC organics as well as MWC metals and PM, and MWC acid gas. This combination of controls can achieve the following emission limits (corrected to 7 percent oxygen [O<sub>2</sub>] on a dry basis):

1. MWC organics control: dioxin/furan control to a level in the range of 5 to 30 nanograms per normal cubic meter (ng/Nm<sup>3</sup>) (2 to 12 grains per billion dry standard cubic feet [gr/billion dscf]) total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans (the precise level within this range will be determined between proposal and promulgation);

2. MWC metals control: PM control to 34 milligrams per dry standard cubic meter (mg/dscm) (0.015 grains per dry standard cubic foot [gr/dscf]); and

3. MWC acid gas control: (a) HCl emissions reduction of 95 percent or an HCl emission limit of 25 parts per million by volume (ppmv), and (b) SO<sub>2</sub> emissions reduction of 85 percent or an SO<sub>2</sub> emission limit of 30 ppmv.

The proposed standards for MWC's located at small MWC plants (those plants that have an aggregate capacity to combust 225 Mg/day [250 tons/day] or less of MSW) are based on the conclusion that the best demonstrated technology for reducing MWC emissions includes: GCP for MWC organics control and dry sorbent injection (DSI) followed by an electrostatic precipitator (ESP) or FF to achieve additional control of MWC organics as well as MWC metals and PM, and MWC acid gas. This combination of controls can achieve the following emission limits (corrected to 7 percent O<sub>2</sub> on a dry basis):

1. MWC organics control: dioxin/furan control to 75 ng/Nm<sup>3</sup> (30 gr/billion dscf) total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans for all types of MWC's except RDF combustors. For RDF's the

dioxin/furan limit would be 250 ng/Nm<sup>3</sup> (100 gr/billion dscf);

2. MWC metals control: PM control to 34 mg/dscm (0.015 gr/dscf); and

3. MWC acid gas control: (a) HCl emissions reduction of 80 percent or an HCl emission limit of 25 ppmv, and (b) SO<sub>2</sub> emissions reduction of 50 percent or an SO<sub>2</sub> emission limit of 30 ppmv.

The EPA is also including materials separation requirements (i.e., separation of certain materials from MSW prior to combustion) in the proposed standards as part of best demonstrated technology. The proposed materials separation standards would apply to all MWC's. The proposed standards would require MSW to be processed before combustion to achieve an overall 25 percent or greater reduction (by weight) of MSW through separating for recovery some or all of the following materials: paper and paperboard; ferrous metals; nonferrous metals; glass; plastics; household batteries; and yard wastes. However, a maximum of 10 percent of the overall weight reduction could be attributed to yard waste; the other 15 or more percent would come from the other specified materials. Additionally, the standards would preclude the combustion in MWC's of lead-acid vehicle batteries weighing more than 5 kg (11 lb), and a program to remove household batteries prior to combustion would be required.

**NO<sub>x</sub> Emissions:** The proposed standards for NO<sub>x</sub> emissions from MWC's located at large MWC plants (plants with the aggregate capacity to combust greater than 225 Mg/day [250 tons/day] of MSW) are based on the conclusion that selective noncatalytic reduction (SNCR) or achievement of NO<sub>x</sub> emission levels comparable to the use of SNCR represents best demonstrated technology for reducing NO<sub>x</sub> emissions. This technology can achieve a NO<sub>x</sub> emission limit in the range of 120 to 200 ppmv (corrected to 7 percent O<sub>2</sub> on a dry basis), on a 24-hour average basis. The precise limit will be determined between proposal and promulgation. Control of NO<sub>x</sub> is not required for small MWC's.

#### D. Format For The Standards

**MWC Emissions:** Since it is not possible to establish or measure stack levels of "MWC emission" as a whole, standards are set for a subset of pollutants that will ensure control of the three subclasses of MWC emissions (MWC organics, MWC metals, and MWC acid gases). The proposed standards for MWC emissions would control MWC organics by establishing a dioxin/furan emission limit. Emissions for dioxins/furans would be calculated

as a concentration (ng/Nm<sup>3</sup>) (gr/billion dscf) at 7 percent O<sub>2</sub>. The proposed standards would control MWC metals by establishing an emission limit for PM and an opacity limit. Emissions for PM would be calculated as a concentration (gr/dscf) at 7 percent O<sub>2</sub>. Since MWC metals are associated with PM in the flue gas and are removed by PM control devices, achieving the specified levels of PM control would result in greater than 97 percent control of the full range of MWC metals (except mercury, for which a lower percent control would be achieved). This approach is more practical than setting limits for each individual metal. The opacity standard allows continuous monitoring, since there are no systems for continuous monitoring of PM mass emissions (gr/dscf). The proposed standards for MWC acid gases (HCl and SO<sub>2</sub>) would establish both a percent reduction requirement and a concentration limit. The MWC owner/operator may comply with either of these two methods for acid gas compliance. The concentration limits for SO<sub>2</sub> and HCl are calculated as ppmv (at 7 percent O<sub>2</sub>).

In addition to controlling stack emissions, the proposed standards would establish combustor operating standards for MWC's. These operating standards are part of GCP and would ensure that MWC organic (dioxin/furan) control is achieved on a continuous basis. They include limits on combustor carbon monoxide (CO) level, maximum MWC load level, and flue gas temperature at the PM control device inlet.

The proposed standards would also require certification of the chief facility operator and shift supervisors by the American Society of Mechanical Engineers (ASME), and development of a training manual to be used for training other MWC personnel. Training is an integral part of the implementation of GCP.

The proposed standards would also require that all MWC's incorporate materials separation procedures to process MSW prior to combustion. All MWC's would be required to process MSW to achieve an overall 25 percent or greater reduction by weight (annual average) of MSW through separating for recovery some or all of the following materials: paper and paperboard; ferrous metals; nonferrous metals; glass; plastics; household batteries; and yard wastes. In calculating the 25 percent overall weight reduction, a maximum credit of 10 percent would be allowed for yard waste separation. In addition, all MWC's would be prohibited from combusting lead-acid vehicle batteries



weighing more than 5 kg (11 lbs) and all household batteries. The materials separation requirements could be achieved by on-site mechanical separation, on-site manual separation, an off-site community source reduction or material separation (recycling) program, or a combination thereof.

**NO<sub>x</sub> Emissions:** The proposed standards establish maximum emission limits for NO<sub>x</sub> emissions from MWC's. The emission limit is calculated as a concentration (ppmv) at 7 percent O<sub>2</sub> on a dry basis.

#### E. Proposed Standards

The proposed standard is subdivided into two sets of requirements, one for MWC's located at large MWC plants and one for MWC's located at small MWC plants. The aggregate capacity of all new MWC's at one site would be added together to define aggregate MWC plant capacity. If the aggregate capacity of all new, modified, and reconstructed MWC's at one site is above 225 Mg/day (250 tons/day), then all new, modified, or reconstructed MWC's at the plant would be subject to the large MWC plant standard. Municipal waste combustors whose construction commenced prior to proposal of this standard are considered to be existing MWC's and would not be covered by the proposed standards and are not considered in calculating aggregate capacity for new MWC's. (See the separate notice in today's Federal Register that proposes emission guidelines for existing MWC's.)

**MWC Emissions:** The proposed standards for control of each subclass of MWC emissions are summarized below. Stack standards are discussed first, followed by combustor operational standards.

**MWC Organics.** The proposed standards for MWC organics would require MWC's at large MWC plants to meet a dioxin/furan emission limit in the range of 5 to 30 ng/Nm<sup>3</sup> (2 to 12 gr/billion dscf). The precise limit within this range will be determined between proposal and promulgation. The MWC's located at small MWC plants would have to meet a dioxin/furan emission limit of 75 ng/Nm<sup>3</sup> (30 gr/billion dscf) at 7 percent O<sub>2</sub> unless they use RDF-type MWC's. At small plants, RDF-type MWC's would have to comply with a limit of 250 ng/Nm<sup>3</sup> (100 gr/billion dscf). These limits would apply to total tetra-through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

**MWC Metals.** The proposed standard for MWC metals would require all MWC's to meet a PM emission limit of 34 mg/dscm (0.015 gr/dscf) at 7 percent O<sub>2</sub>. This PM limit would ensure good

control of metals, and would be a more practical approach than setting individual limits for every metal. Municipal waste combustors would also be required to meet an opacity limit of 10 percent (6-minute average, measured continuously).

**MWC Acid Gases.** The proposed MWC acid gas standards establish limits for HCl and SO<sub>2</sub>. All MWC's located at large MWC plants would be required to achieve a 95 percent reduction in HCl emissions or a 25 ppmv HCl emission limit measured during a compliance test and annual performance tests. Large MWC plants would also be required to achieve an 85 percent reduction in SO<sub>2</sub> emissions or a 30 ppmv SO<sub>2</sub> emission limit on a daily (block) 24-hour average basis, measured continuously.

The proposed standards for MWC acid gases would require all MWC's located at small MWC plants to achieve either an 80 percent reduction in HCl emissions or a 25 ppmv HCl emission limit measured during the compliance test and subsequent performance tests. Small MWC plants would also be required to achieve either a 50 percent reduction in SO<sub>2</sub> emissions or a 30 ppmv SO<sub>2</sub> emission limit on a daily (block) 24-hour average basis, measured continuously.

**Combustion Control.** The standards would also specify MWC operating parameters, which are part of GCP, and would ensure that MWC organics emissions are minimized on a continuous basis. These operating parameters would include CO emission limits, combustor load levels, and flue gas temperatures.

For modular starved air and modular excess air types of MWC's, the CO emission limit would be 50 ppmv (at 7 percent O<sub>2</sub> on a block 4-hour average basis). For mass burn waterwall, mass burn refractory, and fluidized bed types of MWC's, the CO emission limit would be 100 ppmv (at 7 percent O<sub>2</sub> on a block 4-hour average basis). For mass burn rotary waterwall, RDF, and coal/RDF co-fired MWC's, the CO emission limit would be 150 ppmv (at 7 percent O<sub>2</sub> on a block 4-hour average basis).

Municipal waste combustors would not be allowed to operate above 100 percent of the maximum capacity, as measured during a compliance test (1-hour average basis). Municipal waste combustors that do not generate steam would be exempt from maximum load level requirements because these types of MWC's cannot feasibly measure load level.

The proposed standards would require all MWC's to maintain a flue gas temperature of 230° C (450° F) or less (4-

hour block average) at the PM control device inlet to minimize dioxin/furan formation.

**ASME Certification and Operator Training.** As part of GCP, the proposed standard would require certification of the MWC shift supervisor and MWC chief facility operator by ASME. In addition, the proposed standard would require each MWC owner or operator to develop a site-specific training manual to be reviewed by all employees associated with the operation of the MWC. The manual and training would be updated annually.

**Materials Separation:** The proposed standards would require all MWC's to incorporate materials separation procedures to process MSW prior to combustion. All MWC's would be required to process MSW to achieve a 25 percent or greater reduction in MSW by weight (annual average) through separation for recovery of some or all of the following materials: paper and paperboard; ferrous metals (including "white goods", or household appliances); nonferrous metals; glass; plastics; household batteries; and yard wastes. In calculating the 25 percent weight reduction, a maximum credit of 10 percent would be allowed for yard waste separation. In addition, all MWC's would be prohibited from combusting wet lead-acid vehicle batteries weighing more than 5 kg (11 lbs), and a program to remove household batteries prior to combustion would be required. The materials separation requirements could be achieved by on-site mechanical separation, on-site manual separation, a community source reduction or material separation (recycling) program, or a combination thereof. A materials separation system or program capable of achieving these requirements must be implemented at initial start-up for MWC's that commence construction after promulgation of this standard. For MWC's that commence construction between proposal and promulgation, the materials separation program would be implemented on December 31, 1992, or at initial start-up, whichever is later.

**NO<sub>x</sub> Emissions:** The proposed standards for NO<sub>x</sub> emissions would require all MWC's located at MWC plants with the capacity to combust greater than 225 Mg/day (250 tons/day) of MSW to meet a NO<sub>x</sub> emission limit in the range of 120 to 200 ppmv (corrected to 7 percent O<sub>2</sub>) on a 24-hour daily (block) average basis. The precise limit will be determined between proposal and promulgation. Different limits may be set for different subcategories of MWC technologies, and a percent



reduction format may also be considered.

#### *F. Performance Testing and Monitoring Requirements*

**MWC Emissions:** Testing and monitoring requirements are being proposed to ensure control of each subclass of MWC emissions. All emission limits are corrected to 7 percent O<sub>2</sub> on a dry basis. However, an MWC owner or operator may request to correct to an equivalent percent carbon dioxide (CO<sub>2</sub>). In these cases, the correlation between O<sub>2</sub> and CO<sub>2</sub> would be established during the compliance test.

**MWC Organic Emissions:** The proposed MWC organic emissions standard would require performance tests to be conducted in accordance with Method 23 to determine compliance with the dioxin/furan emission limit. Method 23 is also proposed today in a separate notice of this Federal Register. An annual retest would be required for all MWC's. However, at small MWC plants, if three annual performance tests in a row indicate compliance with the dioxin/furan emission limit, small MWC's may skip the annual performance test for the next 2 years. If the next test (after skipping 2 years) shows compliance with the limits, another 2-year period may be skipped. At a minimum, an MWC performance test must be performed by small MWC plants every 3 years. Municipal waste combustors at large MWC plants must test every year.

**MWC Metals:** Performance tests to determine compliance with the PM emission limits (which ensure metals control) would be based on Method 5. Method 1 would be used for selecting the sampling points, and Method 3 would be used for gas analysis. Method 9 (a 6-minute average of 24 observations) would be used to determine compliance with the opacity standard. Subsequent annual performance tests for PM would be required for all MWC's. However, as with dioxin/furan emissions, if three performance tests in a row indicate compliance with the PM limit, small MWC's may skip the annual performance test for the next 2 years. At a minimum, an MWC performance test must be performed by small MWC's every 3 years. Large MWC's must test every year.

**MWC Acid Gases:** The proposed MWC acid gas standards would require continuous monitoring of SO<sub>2</sub> emissions for all MWC's. Compliance with the percent reduction requirement or the emission limit would be determined on a daily (block) 24-hour basis as measured

by the continuous emissions monitoring system (CEMS). Calculations to determine compliance would be made in accordance with Method 19. Quality assurance would be maintained in accordance with Appendix F.

The proposed MWC acid gas standards for HCl would require performance tests to be conducted in accordance with Method 26 to determine compliance with the HCl percent reduction requirements or emission limits. Method 26 is proposed in a separate notice in today's Federal Register. Subsequent annual performance tests would be required for all MWC's. However, at small MWC plants, if three performance tests in a row indicate compliance with the HCl limit, the MWC's may skip the annual performance test for the next 2 years. At a minimum, an MWC performance test must be performed by small MWC's every 3 years. Large MWC's must test every year.

**Operating Standards:** Continuous monitoring of certain MWC operating parameters would be required to ensure GCP are implemented on a continuous basis. These parameters are flue gas CO level, MWC load level, and flue gas temperature at the PM control device inlet. Compliance with the CO limit would be determined on a block 4-hour average basis as measured by a CEMS. Calculations to determine compliance would be made in accordance with Method 10. Quality assurance would be maintained in accordance with Appendix F. Load level (percent of full load) would be measured using steam flowrate, and a 1-hour average used to determine compliance. Compliance with the temperature standard is determined through continuous monitoring and a 4-hour averaging period.

**Requirements for CEMS:** A minimum data requirement applicable to all CEMS is also proposed. Data must be collected for a minimum of 75 percent of the MWC operating hours per day for 75 percent of the operating days per month.

**Materials Separation:** The proposed standards would require that all MWC's document that materials separation procedures are in place which meet: (1) the 25 percent overall separation requirement, (2) the lead-acid vehicle battery removal requirement, and (3) the household battery removal requirement. If an off-site or community program is used to comply in whole or in part with the requirements, a plan describing the separation program and the methods to be used to measure compliance would be submitted to EPA or the State agency for approval.

Compliance with the 25 percent overall MSW reduction requirement

would be determined annually.

Compliance would be based on an average of 12 monthly measurements of the total weight of MSW received, the weight of MSW combusted, and the weight of materials separated for recovery during each month. Demonstration of compliance with the annual average percent MSW reduction would not be required until the end of the second complete calendar year (January through December) after the initial start-up of the MWC. A report of the percent reduction achieved would be submitted at the end of the first calendar year, but would not be used to determine compliance. For MWC's that commence construction between proposal and promulgation, initial demonstration of compliance is required at the end of calendar year 1994 or at the end of the second calendar year after initial start-up, whichever is later.

Separation procedures could include mechanical separation, manual sorting, or curbside separation programs. If an off-site source reduction or materials separation (recycling) program is used to meet the materials separation requirements, the MWC and the party responsible for off-site separation may enter into a contractual relationship. The contractual relationship could designate the MWC and the off-site separator as co-operators of the MWC regarding compliance with the materials separation requirements. The contract could also specify the responsibilities of each party and the actions the off-site separator would take to meet the requirements for the 25 percent MSW reduction and/or removal of vehicle batteries and/or household batteries, as applicable.

The proposed materials separation requirements would also include a combustion permit provision that would be renewable on an annual basis. The permit would be available for MWC's that separate combustible material (e.g., paper, plastics) for recycle but for which there are no markets for the separated material. When a permit had been issued, the separated material could be combusted in the MWC. As proposed, application for the combustion permit must be made to EPA.

**NO<sub>x</sub> Emissions:** The proposed NO<sub>x</sub> standards would require continuous monitoring of NO<sub>x</sub> emissions for all MWC's located at MWC plants with aggregate capacities to combust greater than 225 Mg/day (250 tons/day) of MSW. An initial compliance test for NO<sub>x</sub> would be required during the first 24 consecutive unit operating hours at full load. Compliance with the emission limit would be determined on a daily



(block) 24-hour average basis as measured by the CEMS. Calculations to determine compliance would be made in accordance with Method 19. Quality assurance would be maintained in accordance with Appendix F. The proposed minimum data requirements for CEMS would also apply.

#### G. Reporting and Recordkeeping

The proposed standard would require all MWC owners or operators to submit a notification of the intent to construct and to initiate operation of a new, modified, or reconstructed MWC, as well as the results of the initial performance test and performance evaluation of the CEMS.

The proposed standards also require quarterly reports of CEMS drift tests and accuracy determinations in accordance with Appendix F, and reports of any periods when the minimum data requirements for CEMS were not met.

Records of all data, including results of emission tests and CEMS data, must be maintained for 2 years and made available to enforcement personnel upon request.

**MWC Emissions:** Quarterly continuous compliance reports for SO<sub>2</sub> and combustor operating parameters (CO, load, and temperature) would be required under the proposed standards. Quarterly excess emission reports would be required for opacity. Annual compliance reports for dioxins/furans, PM, and HCl would also be required under the proposed standards. However, if small MWC's have met the criteria allowing them to skip the annual compliance tests for dioxins/furans, PM, or HCl, they would submit a simplified annual report.

**Materials Separation:** Annual compliance reports for materials separation would be required under the proposed standards. The first report would be submitted at the end of the first calendar year after start-up of an MWC, but would not be used to determine compliance. This interim report would be used to observe progress made toward the materials separation requirements. Reports submitted beginning the end of the second calendar year after start-up (or the end of 1994 for MWC's that commence construction between proposal and promulgation) would be used to determine compliance. Records of the weight of MSW received at the MWC, the weight combusted, and the weight of each material separated for recovery (on a monthly basis) would also be kept. Additionally, records would be maintained of the weights of vehicle batteries and household batteries removal.

**NO<sub>x</sub> Emissions:** Quarterly compliance reports for NO<sub>x</sub> would also be required under the proposed standards.

### III. Impacts of the Standards

#### A. Air

**MWC Emissions:** In the fifth year after adoption, the standards would reduce nationwide emissions of dioxins/furans from municipal waste combustors (MWC's) by about 15 kilograms/year (kg/year) (34 lbs/year) compared with projected emission levels under the regulatory baseline. This represents a reduction of over 90 percent. Emissions of particulate matter (PM) would be decreased by about 6,000 Mg/year (6,600 tons/year) compared with projected emission levels under the regulatory baseline. Overall MWC metal emission reductions of about 99 percent for all metals except mercury would be achieved by the air pollution control system. Nationwide emissions of SO<sub>2</sub> would be decreased by about 36,000 Mg/year (39,000 tons/year) compared with projected emission levels under the regulatory baseline. Nationwide emissions of HCl would be decreased by about 47,000 Mg/year (52,000 tons/year) compared with projected emission levels under the regulatory baseline. This represents a reduction of over 90 percent in MWC acid gas emissions.

**Materials Separation:** The proposed requirements for materials separation would reduce the overall amount of waste combusted by about 25 percent and would reduce overall MWC emissions; however, the amount of emissions reduction cannot be accurately predicted since there are little data relating materials separation to MWC emissions when materials separation occurs in conjunction with at-the-stack air pollution control. Additional reductions in emissions of MWC organics, MWC metals and mercury, MWC acid gases, and NO<sub>x</sub> are expected.

**NO<sub>x</sub> Emissions:** In the fifth year after this new source performance standard (NSPS) becomes applicable, nationwide emissions of NO<sub>x</sub> would be reduced by about 12,000 Mg/year (13,000 tons/year) compared with projected emission levels under the regulatory baseline. This is roughly a 40 percent reduction.

#### B. Water and Solid Waste

**MWC Emissions:** Under the proposed standards for MWC emissions, no significant water pollution impacts are projected because none of the emission control technologies that were considered in developing these standards would produce a wastewater stream.

No significant solid waste impacts are projected from these proposed standards for MWC emissions. Requirements for good combustion practices (GCP) tend to reduce the quantity of ash generated by MWC's, whereas addition of acid gas control slightly increases the quantity of ash generated due to addition of lime scrubber solids. Overall, the proposed standards would increase the net amount of MWC ash generated by roughly 9 percent or 330,000 Mg/year (363,000 tons/year) relative to baseline. However, combustion of MSW as opposed to direct landfilling greatly reduces the volume of waste to be disposed of in landfills (by approximately 90 percent) and extends landfill life. Even with the increased ash, combustion would still reduce the volume of waste by about 90 percent.

It is unclear what, if any, effect acid gas control would have on ash quality. However, increased scrutiny and control over waste disposal in municipal waste landfills should result in environmentally adequate ash disposal practices. The EPA is required, under the Resource Conservation and Recovery Act (RCRA) Section 4010(c), to develop criteria for sanitary landfills that receive household hazardous waste and small quantity generated hazardous waste, which criteria are to protect human health and the environment, taking into account the practicable capability of such facilities. These criteria may ultimately be Federally enforceable if States do not adopt adequate programs to implement them. RCRA Section 4005(c). The EPA has proposed criteria for all MSW landfills pursuant to these provisions. These criteria would require such controls as groundwater monitoring, closure, financial responsibility, and corrective action standards for existing MSW landfills, and also would require risk-based performance standards for new landfills or lateral expansions of existing MSW landfills. 53 FR 33314 (August 30, 1988). Pending legislation, although at an early stage of the legislative process, would require even more stringent controls and, in some bills, a whole separate regulatory system for MWC ash. The EPA thus believes that ash disposal will ultimately be adequately addressed by waste disposal management standards so that considerations of ash quality need not play a significant role in this rulemaking. However, to the extent that future EPA or Congressional action increases the stringency of controls and thereby cost of MWC ash disposal, the increased cost of ash disposal will be



considered as part of this rulemaking. The EPA solicits comment regarding the effect of potential future MWC ash disposal standards on this rule.

**Materials Separation:** The proposed materials separation standards would encourage source reduction and recycling of materials, thereby reducing the volume of solid waste and ash to be disposed of in MWC's or landfills. Any national strategy adopted by Congress and implemented at the State and local level would be credited toward the material separation requirement in this rule.

**NO<sub>x</sub> Emissions:** Under the proposed standards for NO<sub>x</sub>, no significant water pollution impacts are projected because none of the NO<sub>x</sub> emission control technologies that were considered in developing these standards would produce a wastewater stream.

No significant solid waste impacts are projected from these proposed NO<sub>x</sub> standards. The NO<sub>x</sub> emission control technologies considered in developing these standards do not affect ash quality or quantity.

#### C. Energy Impacts

**MWC Emissions:** An MWC regulated under the proposed standard for MWC emissions would require additional energy to operate the control equipment used to comply with the standards. Total national usage of energy would increase by about 210,000 megawatt hours per year (MW-hrs/year). The majority of MWC's that would be affected by the proposed standards are cogeneration MWC's that combust municipal solid waste (MSW) and produce steam that is used to generate electricity for sale. For example, a typical large mass burn MWC would generate about 410,000 MW-hrs/year of electricity. Although these MWC's would require additional energy to operate control equipment, the additional energy use would only be about 11,000 MW-hrs/year at a typical large MWC, which has a very small impact on overall energy generated at the plant (a net reduction in energy generation of 2.8 percent). No other energy impacts would be associated with these proposed standards for MWC emissions.

**Materials Separation:** A small additional amount of energy would be used if mechanical materials separation procedures are practiced at the MWC plant. However, on a national basis, positive energy benefits are expected as a result of the materials separation requirements. The recycling of separated materials reduces overall energy use since the combined extraction and

development of equivalent virgin raw materials is relatively energy-intensive.

**NO<sub>x</sub> Emissions:** An MWC regulated under the proposed standards for NO<sub>x</sub> would require a small amount of additional energy to operate the NO<sub>x</sub> control equipment used to comply with the standard. For example, a large mass burn MWC would require about 3,200 MW-hrs/year of electrical energy for selective noncatalytic reduction (SNCR) NO<sub>x</sub> control. The combined additional electrical energy requirement for control of both MWC emissions and NO<sub>x</sub> would equate to a reduction in energy generation of only 3.3 percent. No other energy impacts would be associated with these proposed NO<sub>x</sub> standards.

#### D. Control Costs

The total annualized costs of control in the fifth year after proposal of the standards would be about \$190 million/year, and the overall national average annualized cost per unit of MSW combusted would be \$12.90/Mg (\$11.70/ton) of MSW combusted. This includes the costs of control for MWC emissions, materials separation, and NO<sub>x</sub> control. For perspective, typical costs incurred by the general public for disposal of MSW range from \$40 to over \$100/Mg (\$36 to over \$90/ton) of MSW, including collection, transportation, combustion, and ash disposal.

Cost increases for typical large MWC plants would range from about \$10 to \$22/Mg (\$9 to \$20/ton) of MSW combusted. Cost increases for typical small MWC plants would range from \$9 to \$47/Mg (\$8 to \$43/ton) of MSW combusted. The MWC's located at small MWC plants would not be required to control NO<sub>x</sub> emissions. The portion of the national cost and model plant impacts attributable to each standard are summarized below.

**MWC Emissions:** During the fifth year of applicability of the proposed standards, the overall average projected increase in nationwide annualized costs for controlling MWC emissions would be about \$10.90/Mg (\$9.90/ton) of MSW combusted. The nationwide projected increase in capital costs for controlling MWC emissions would be about \$500 million.

On a per plant basis, the annual disposal cost for a typical large MWC would increase by between \$8 and \$19/Mg (\$7 and \$15/ton) of MSW combusted, depending on the size and design of the MWC. The annual disposal cost for a typical small MWC would increase by between \$9 and \$47/Mg (\$8 and \$43/ton) of MSW combusted, depending on the size and design of the MWC.

**Materials Separation:** Over the long term, the proposed materials separation requirements are not expected to result in an increase in national annualized costs. While some costs will be initially incurred to purchase and operate materials separation systems, as markets develop and stabilize, these costs will be offset by credits for sale of separated materials, reduced landfill disposal cost (due to reduced amounts of MWC ash generated and disposed of in landfills), and other monetary benefits described in section V.

Annual disposal cost increases or decreases for materials separation could occur at individual plants depending on materials sales assumptions. At typical large MWC plants materials separation costs could vary from a net cost of about \$20/Mg (\$18/ton) of MSW combusted without materials sales to a net savings of about \$20/Mg (\$18/ton) of MSW combusted when markets for separated materials develop and the materials are sold. For a typical small MWC plant, annual costs for materials separation could range from a net cost of about \$11/Mg (\$10/ton) to a net savings of about \$25/Mg (\$23/ton) of MSW.

**NO<sub>x</sub> Emissions:** During the fifth year of applicability of the proposed NO<sub>x</sub> standards, the overall average projected increase in nationwide annualized costs for controlling NO<sub>x</sub> emissions would be about \$2.00/Mg (\$1.80/ton) of MSW processed. By the fifth year of applicability of the proposed standards, the nationwide projected increase in capital costs for controlling NO<sub>x</sub> emissions would be about \$97 million.

Under the proposed standards, the cost of NO<sub>x</sub> controls for a typical large MWC could increase the cost of disposing of MSW through combustion by between \$1.70 and \$3.60/Mg (\$1.50 and \$3.30/ton) of MSW processed, depending on the size and design of the combustor.

#### E. Economic Effects

**MWC Emissions:** The economic effects of the proposed standards for MWC emissions on individual households are not projected to be severe.

Under the proposed standards for MWC emissions, over 90 percent of the MWC service areas examined are projected to have household impacts of less than \$30/year. Likewise, the increase in waste disposal costs from the proposed standards would not result in severe economic impacts on any city or county government units. Furthermore, the proposed standards would not noticeably affect the mix of



MWC types or the amount of MSW combusted.

**Materials Separation:** The costs of materials separation, when added to the cost of the other MWC emissions controls, would not cause severe impacts on households or government units. Costs may increase slightly in the short term in some instances where local markets for separated materials are not yet well developed. Also, households will experience some inconvenience in those areas which adopt a curbside program. However, as markets develop and stabilize, EPA believes the sale of materials for recovery will offset MSW disposal costs for households and government units. In general, materials separation standards and other Agency programs to encourage reuse will reduce the amount of MSW that must be disposed of, thereby reducing the overall costs of MSW disposal.

**NO<sub>x</sub> Emissions:** The costs to control NO<sub>x</sub> emissions are much lower than the costs to control MWC emissions and would not cause combined impacts on households or government units to become severe.

#### IV. Rationale for the Standards for MWC Emissions

##### A. Background

The regulatory interest in municipal waste combustors (MWC's) can be traced to the 1971 new source performance standard (NSPS) for particulate matter (PM) emissions from municipal incinerators larger than 45 Mg/day (50 tons/day) capacity under section 111(b) of the Clean Air Act (CAA) (40 CFR part 60, subpart E). Similarly, in 1986 a PM standard was promulgated for industrial-commercial-institutional steam generating units larger than 29 MW (100 million Btu/hour) heat input capacity combusting a number of fuels including municipal solid waste (MSW) (40 CFR part 60, subpart Db). The 1986 PM standard was more restrictive than the 1971 standard. New MWC's that are equipped with steam generating units and process roughly 225 Mg/day (250 tons/day) or more of municipal waste per MWC (which is approximately equivalent to 100 million Btu/hour) are subject to the 1986 NSPS. The subpart E and Db standards, however, were developed to control emissions of PM and do not address control of toxic organics or health concerns specific to toxic organics or other components of MWC emissions.

In section 102 of the 1984 Hazardous and Solid Waste Amendments to the Resource Conservation and Recovery

Act (RCRA), Congress directed EPA to prepare a report on the magnitude of dioxin risks from MWC's and to identify ways in which dioxin emissions could be minimized. In addition, during 1984 and 1985, the EPA's Office of Air and Radiation (OAR), in the course of assessing candidate air toxics, identified MWC's as a potential source category of concern. In June 1985, the Administrator announced the National Air Toxics Strategy, which included the commitment to regulate source categories of widespread national concern and give high priority to those that emit multiple pollutants such as MWC's. In addition to the above-mentioned regulatory activities, on August 5, 1988, the Natural Resources Defense Council (NRDC) and the States of New York, Rhode Island, and Connecticut petitioned the Administrator of EPA to regulate air emissions from MWC's under sections 111 and 112 of the CAA.

In response to the Congressional directive, and as part of the OAR's air programs, EPA prepared a Report to Congress that was issued in June 1987. This nine-volume report presented a compilation of the available information on MWC's including industry characteristics, emission data, health risks, control technologies, and costs of control. It provided the technical basis for the 1987 decision to regulate air emissions from MWC's.

On July 7, 1987, an advanced notice of proposed rulemaking (ANPRM) was published in the Federal Register (52 FR 25339) where EPA announced its preliminary determination to regulate new and existing MWC's under Sections 111(b) and 111(d) of the CAA, respectively. The schedule announced in the Federal Register for these actions called for proposal of NSPS for new MWC's and issuance of draft 111(d) emission guidelines for existing MWC's by November 1989 and promulgation by December 1990. The Administrator determined that MWC's would be regulated under Sections 111(b) and 111(d) because: (1) MWC emissions may reasonably be anticipated to contribute to the endangerment of public health and welfare, (2) the range of health and welfare effects and the range and uncertainties of estimated cancer risks do not warrant listing of MWC emissions as a hazardous air pollutant under Section 112, (3) Section 112 could not be used to address particular constituents or subgroups of emissions including lead and hydrogen chloride (HCl), and (4) the development of emission guidelines for existing MWC's under Section 111(d) would permit a more thorough evaluation of existing

MWC's at the State level than would be feasible in a general rulemaking at the Federal level. (Under Section 111(d), States develop standards based on the EPA guidelines.) Some States already have adopted or are developing their own MWC regulations.

In a concurrent action, the EPA's Office of Air Quality Planning and Standards (OAQPS) issued operational guidance to State and local agencies for best available control technology (BACT) determinations for permitting of new and modified MWC's pursuant to the prevention of significant deterioration (PSD) and new source review (NSR) provisions of the Act. The purpose of the guidance was to resolve questions over the selection of appropriate controls to satisfy minimum legal requirements and thereby facilitate the permitting process for new MWC's.

An Agency MSW Task Force was formed in 1988 to address the full range of problems associated with MSW. Today's air emission standards are only one component of the plan developed by the MSW Task Force entitled, "The Solid Waste Dilemma: An Agenda for Action" (EPA/530-SW-88-052). Other ongoing and planned activities include regulations for new and existing NSW landfills proposed under RCRA, Subtitle D (53 FR 33314, August 30, 1988). Standards to control air emissions from municipal landfills are currently being developed. In addition, as stated in the "Agenda for Action," EPA encourages the use of recycling programs and source reduction activities to reach the goal of achieving a nationwide waste reduction of 25 percent by 1992. The Agency has also encouraged the development of State and local planning strategies to manage waste.

Today's proposal would apply to all facilities that combust municipal-type solid wastes or mixtures containing municipal-type solid wastes. Certain types of waste combustors would not be covered by this NSPS for MWC's because they do not combust MSW. These other types of combustors are regulated elsewhere. For example, hazardous wastes such as industrial sludges and chemical wastes are not covered under this NSPS for MWC's. However, hazardous waste combustion is regulated under RCRA authority (40 CFR 264 and 265 subpart O). The combustion of sewage sludge is regulated by an NSPS (40 CFR 60 subpart O) and also by regulations being developed under the Clean Water Act (40 CFR 503 Subchapter O). Medical waste combustion or combustion of infectious wastes from hospitals are not covered by today's proposal, but are



being investigated for regulation under a separate standard.

#### B. Selection of Source Category

As mentioned above, PM emissions from MWC's are presently regulated under Subparts E and Db. In addition, NSR and PSD permits for new MWC's are subject to EPA operational guidance. However, because of the increasing trend toward combustion of MSW in the U.S., the complex mixture of MWC emissions, and potential public health impacts, a more comprehensive approach to MWC's is necessary. Greater emphasis is being placed on controlling the entire range of emissions from MWC's. This new approach has been adopted for several reasons.

The number of new MWC's and amount of waste combusted is expected to grow significantly in the future due to increasing restrictions and limited space availability for landfilling. Municipal waste combustors reduce landfill requirements and extend landfill life, although they do not replace landfills. While 80 percent of the Nation's MSW is currently disposed of in roughly 6,000 landfills, many of these facilities are nearing capacity and the siting of new landfills, particularly in urban areas, has become increasingly difficult. Up to one-third of existing landfills are expected to become full and then close within the next 5 years.

Because of the difficulty in siting new landfills in many areas, it is expected that construction will commence on over 60 MWC plants (over 150 individual MWC's) in the next 5 years alone. This equates to a new MWC capacity of about 50,000 Mg/day (54,000 tons/day) in the next 5 years. This is a substantial increase compared to the roughly 210 MWC plants (450 individual MWC's) with a capacity of 95,000 Mg/day (105,000 tons/day) that are currently operating or under construction. Many of the new MWC's will be located at large MWC plants and some will be located in heavily populated areas.

On a national basis, MWC's, if not adequately controlled, could be a major source of emissions. Without the standards proposed today, emissions of all pollutants from MWC's would increase by over 100,000 Mg (110,000 tons) per year by 1994. This includes increases of over 7,500 Mg (8,300 tons) of PM, 91,000 Mg (100,000 tons) of MWC acid gases (sulfur dioxide [SO<sub>2</sub>] and HCl combined), and almost 5,600 Mg (6,200 tons) of carbon monoxide (CO).

Municipal waste combustors are also significant sources of air pollution at the individual plant level. For example, in the absence of regulation, a typical 90 Mg/day (100 ton/day) modular MWC

plant would emit about 24 Mg/year (26 tons/year) of PM, about 170 Mg/year (190 tons/year) of MWC acid gases (SO<sub>2</sub> and HCl), about 8 Mg/year (9 tons/year) of CO, and about 40 g (0.09 lbs) per year of dioxins/furans. A typical large mass burn MWC plant with a design capacity of about 2,000 Mg/day (2,200 tons/day) would emit about 330 Mg/year (360 tons/year) of PM, about 3,900 Mg/year (4,300 tons/year) of MWC acid gases (SO<sub>2</sub> and HCl), about 170 Mg/year (190 tons/year) of CO, and about 600 g/year (1.3 lbs/year) of dioxins/furans.

Finally, due to their nature and magnitude, emissions from MWC's, if not adequately controlled, can pose health risks to the public. Both MWC organics and MWC metals include carcinogens. Ranges of cancer risk estimates for MWC emissions were published in the 1987 ANPRM (52 FR 25339). A recent review of risks using data and information gathered to support development of NSPS, found that cancer risks for MWC's are likely at the lower end of the ranges cited in the ANPRM, although there remain significant uncertainties in the risk assessment. Therefore, there is no reason to review the 1987 decision to regulate MWC's under Section 111 of the CAA.

In addition to cancer risks, HCl emissions are also of concern because short-term modeling has shown that, in the absence of further regulation, ambient HCl exposures near some MWC plants may exceed the short-term interim health effects level for HCl. The long-term interim welfare effects (materials damage) ambient concentration of 3 micrograms per dry standard cubic meter (ug/dscm) (1.3 gr/million dscf) (annual average) may also be exceeded by some model plants.

For the above reasons, MWC's have been determined to be a major source of air pollution which may reasonably be anticipated to endanger public health and welfare. As a result, MWC's have been selected for regulation.

On August 5, 1986, the NRDC and the States of New York and Florida (collectively "Petitioners") filed administrative petitions with the Agency requesting that EPA list specified pollutants emitted from MWC's as "hazardous" under Section 112(b)(1)(A) of the CAA; that EPA establish national emission standards under Section 112(b)(1)(B) for such hazardous pollutants; and that EPA regulate, under Section 111, nonhazardous pollutants emitted from MWC's. The EPA reiterates its tentative conclusion, first advanced in the July 7, 1987, ANPRM, that regulation of MWC's under Section 111 is the most appropriate means of

controlling risks to human health and the environment posed by emissions from these sources. In the 1987 ANPRM, EPA stated that regulation under Section 111 was most appropriate due to the need to control the range of pollutants found in MWC emissions, and the inappropriateness of controlling many of the components of MWC emissions under Section 112, given that many of the components do not meet the criteria for listing and regulation under Section 112. (52 FR 25406). The EPA also indicated that uncertainties in assessing risks posed by emissions of chlorinated dioxins and dibenzofurans emitted by these sources made Section 112 a less appropriate regulatory vehicle.

Further study reinforces all of these conclusions. In particular, the EPA's best estimate is that risks posed by dioxin and furan emissions from MWC's are in the low end of the range EPA estimated in the 1987 ANPRM. Thus, EPA continues to believe that the best regulatory approach is to use its Section 111 regulatory authorities. Accordingly, the Administrator is hereby proposing to deny the administrative petition filed by Petitioners to the extent they seek to have emissions from MWC's regulated under Section 112.

#### C. Modification or Reconstruction of Existing MWC's

Only those MWC's for which construction, modification, or reconstruction is commenced after today's date would be affected by the proposed standards. "Construction" is defined by 40 CFR 60.2 to mean "fabrication, erection or installation of an affected facility." *Sierra Pacific Power Co. v. EPA*, 647 F.2d 60 (9th Cir. 1981). The affected facility for this standard is the MWC as defined in the proposed standards [Section 60.51a]. "Commenced" is defined by 40 CFR 60.2 to mean "that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification." The phrase "contractual obligation" means a contractual obligation that cannot be cancelled without incurring significant liability. *Potomac Electric Power Co. v. EPA*, 650 F.2d 509, 513-515 (4th Cir. 1981).

If an existing MWC (which commenced construction before today's date) is modified for the purpose of meeting the requirements of the proposed guidelines for existing MWC's (40 CFR part 60, Subpart Ca), which are proposed elsewhere in today's Federal



Register or State regulations developed to implement these guidelines, then the MWC would not be considered "modified" or "reconstructed" and would not be subject to this NSPS. A special provision to clarify this has been included in the proposed NSPS and 111(d) emission guidelines. However, if the existing facility is modified or reconstructed in ways not required to meet the emission guidelines, for example if MWC capacity is increased, then the MWC may be considered modified or reconstructed and subject to the NSPS.

In general, "modification" refers to "any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies . . ." as described in the general NSPS provisions (40 CFR 60.14). "Reconstruction" generally includes "the replacement of components of an existing facility to such an extent that: (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new facility, and (2) it is technologically feasible to meet the applicable standards . . ." (40 CFR 60.15); however, reconstruction is determined on a case-by-case basis. As mentioned above, cases where such an expenditure is required to meet the 111(d) emission guidelines in 40 CFR part 60, Subpart Ca, would not be considered a modification or reconstruction under this NSPS.

#### D. Selection of Designated Pollutant

The collection of compounds emitted by MWC's, referred to as "MWC emissions", has been selected as the designated pollutant for regulation under Section 111(b) of the CAA. This approach was selected because of the large number of compounds emitted by MWC's that create potential health problems.

Emissions from MWC's are a complex mixture of numerous pollutants that affect public health. There are three general subclasses of pollutants within MWC emissions. These are MWC organics, MWC metals, and MWC acid gases. Organic emissions from MWC's, in particular dioxin/furans, are potentially carcinogenic. Emissions of MWC metals contain various metals that have carcinogenic and noncarcinogenic health impacts. The great majority of MWC metal emissions are condensed on PM emissions. These include cadmium, chromium, lead, beryllium, and arsenic. Emissions of MWC acid gases (specifically HCl and SO<sub>2</sub>) pose several health- and welfare-

related problems. Of specific concern are emissions of HCl where short-term ambient exposure levels around some MWC's may exceed short-term health effects levels. Also, long-term ambient concentrations may exceed welfare-effects levels for materials damage. Furthermore, MWC acid gases are precursors in the formation of acid deposition (acid rain), which adversely affects vegetation, surface water quality, and aquatic life. In combination, these effects support a health-based designation of MWC emissions under Section 111, although there are also welfare considerations.

The EPA has determined that it is unnecessary to measure MWC emissions as an entity and that it makes far more sense to develop standards for certain component parts of MWC emissions. However, MWC emissions contain 100 or more components (many diverse metals and organics, for example). Although it is theoretically possible to measure all of the components, such a task would be extremely burdensome, expensive, and quite impractical. The standards that EPA is proposing provide a high level of control for total MWC emissions, and do so in a way that avoids the administrative burden and expense associated with monitoring and measuring all components of MWC emissions.

#### E. Selection of Affected Facilities

For the proposed NSPS, the affected facility, an MWC, is defined as any combustion device used to burn MSW (including refuse-derived fuel [RDF]). The proposed standards would apply to incinerators (with and without heat recovery) and all types of MSW-fired steam generating units.

An MWC would be covered by this regulation if it burns MSW (including RDF) or a mixture of wastes or fuels containing MSW. The MSW is defined as refuse, more than 50 percent of which is municipal-type waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustibles, and noncombustible materials such as glass, metal, and rock. The MSW burned in the MWC's includes municipal-type waste from households as well as institutional, commercial, municipal, and industrial sources. These wastes can be characterized in a number of ways. Household wastes include municipal-type wastes generated by single- and multiple-family dwelling units (including garbage, trash, and yard wastes). Wastes from multiple-family units are usually collected in large containers and removed by commercial haulers. These

wastes are also covered by today's standards. Institutional wastes include mixtures of municipal-type wastes generated by schools and colleges, and similar public buildings. Nonpathogenic wastes from medical institutions, such as hospitals and nursing homes (e.g., wastes from their cafeterias and administrative offices), are also covered by these standards. Commercial MSW includes municipal-type waste mixtures generated by retail stores, shopping centers, office buildings, restaurants, hotels, airports, wholesalers, and other commercial establishments. The standards also cover municipal-type wastes generated by municipal public works or industries—such as mixtures containing corrugated boxes and other parking materials, brush and tree trimmings, cafeteria wastes, and paper towels. These standards do not cover any hazardous or nonhazardous industrial process wastes. They also do not cover infectious hospital wastes. It should be noted that MSW can be mixed with and combusted with sewage sludge from publicly owned treatment works, and such combustion would be covered by the proposed standards. However, combustion of sewage sludge alone would not be covered.

Municipal solid waste also includes RDF. To produce RDF, the solid waste is shredded and classified by size prior to combustion.

As noted in the preceding paragraph, a source burning any amount of MSW would be classified as an MWC for purposes of this regulation and, consequently, would have to meet the standards for MWC's. If a unit were classified under more than one set of standards (for example, a boiler burning MSW which also burns fossil fuel), it would have to meet both sets of standards, and the more stringent set of standards in the event of an overlap. The EPA believes this requirement is appropriate given that the source has chosen to burn MSW and, therefore, it should have to meet the demonstrated standards for burning that material. The EPA realizes, however, that this reading would discourage burning small amounts of MSW in units other than dedicated MWC's, and solicits comments on whether this is a desirable result. Commenters advocating some type of *de minimis* feed exception in the MSW definition should justify their choice of the cutoff.

The proposed standard is subdivided into two sets of requirements, one for MWC's located at large MWC plants and one for MWC's located at small MWC plants. For purposes of determining if an MWC is subject to the



small plant or large plant requirements under the NSPS, the capacity of all new MWC's constructed after today's date at the same location would be aggregated (i.e., added together). All new MWC's at the plant would then be subject to the large or small plant requirements depending on whether this aggregate capacity were greater than or less than 225 Mg/day (250 tons/day). Municipal waste combustor capacity is defined as the maximum design charging rate for each MWC, as measured in Mg/day (tons/day) of MSW combusted. Municipal waste combustors constructed prior to proposal of today's NSPS but located at the same MWC plant would not be added to MWC plant capacity for the purpose of determining whether a new MWC is subject to the large or small plant requirements under the NSPS.

For example, if five new 80 Mg/day (90 ton/day) modular MWC's were constructed simultaneously at the same location they would be subject to the same requirements as a single 400 Mg/day (450 ton/day) MWC.

Total capacity of new MWC plants is usually planned in advance, but MWC's may be built at different times so that planned capacity is not reached immediately. If, for example, two 200 Mg/day (220 tons/day) MWC's are built at the same location but at different times, when the first 200 Mg/day (220 tons/day) MWC is constructed after today's date, the new MWC aggregate plant capacity would be 200 Mg/day (220 tons/day). This capacity is less than the 225 Mg/day (250 tons/day) definition of a large MWC plant, so the new MWC would be subject to the standards for MWC's at small MWC plants. However, when the second 200 Mg/day (220 tons/day) MWC is built later at that same location, then the new MWC aggregate plant capacity would be 400 Mg/day (450 tons/day), and both MWC's would become subject to the standards for large plants, just as if one 400 Mg/day (450 tons/day) MWC had been built. This aggregation ensures that new MWC capacity at MWC plants is subject to the same standards from plant to plant, whether this new capacity is built in stages or is built at one time. As another example, if a new 200 Mg/day (220 tons/day) MWC is built at an existing plant of one 200 Mg/day (220 tons/day) MWC, the new MWC aggregate capacity would be 200 Mg/day (220 tons/day), and the new MWC would be subject to the standards for new MWC's at small MWC plants.

The EPA is proposing this approach to determining new MWC size classification because the Agency

believes that the total plant capacity is known at the time of initial construction, even if some of that capacity is constructed years in the future.

As mentioned above, the proposed capacity aggregation provision applies to all new MWC's constructed at the same location. For the purpose of the proposed standards, "same location" refers to the same or contiguous property that is under common ownership or control. Properties are considered contiguous if they are directly adjoining or are separated only by a street, road, highway, or other public right-of-way. Properties are considered under the same ownership or control if owned or operated by the same entity, a parent entity, a subsidiary, or subdivision, or any combination. Included are properties owned or leased by a business, government, or quasi-governmental entity (e.g., a public utility district or regional waste disposal authority).

The proposed capacity aggregation provision is included in the standards because of the common practice within the MWC industry of constructing multiple MWC's at the same location. Because multiple small MWC's can have the same emission impacts as a single large MWC, EPA believes it would be reasonable to apply the proposed standards to all new MWC's otherwise subject to this subpart at the same location, regardless of the exact timing of their construction. The EPA solicits comment on the proposed definition of affected facility and the aggregation provision for new MWC's constructed at the same location.

#### *F. Selection of Best Demonstrated Technology*

**Types of Combustors:** There are three main types of technologies used to combust MSW: mass burn, modular, and RDF. A fourth type, employing fluidized-bed combustion (FBC) technology, is less common and can be considered a subset of RDF technology. Although these are the main types of MWC technologies, there are variations within these categories, and there are designs that incorporate features of more than one type.

Mass burn MWC's are field-erected MWC's covering a wide size range with individual MWC's ranging in size from 45 to 900 Mg/day (50 to 1,000 tons/day) of MSW combusted. There are typically two or three MWC's per plant, and plant capacities range from about 90 to 2,700 Mg/day (100 to 3,000 tons/day) of MSW. The technology is called mass burn because the waste is combusted without any preprocessing other than removal of items too large to go through the feed

system. Typical mass burn MWC's use hydraulic rams or pusher grate sections to push the refuse from the fuel chute onto the grate. Additional grates or rams are used to move the waste through the MWC and to promote complete combustion by agitation of the thick fuel bed. Most mass burn MWC's are constructed of waterwalls, which is a method used for cooling the combustion chamber and recovering heat.

Modular MWC's also burn waste without preprocessing, but are usually shop-fabricated, small MWC's ranging in size from 5 to 110 Mg/day (5 to 120 tons/day) of MSW. Plants typically have one to four MWC's (although a few have more), and plant capacities typically range from about 14 to 360 Mg/day (15 to 400 tons/day) of MSW.

To allow shop fabrication size restrictions while also providing sufficient flue gas residence time to complete combustion, modular MWC's employ two or more combustion chambers. Depending on the design, combustion air is supplied to the primary chamber either in excess of the stoichiometric amount required for complete combustion (modular excess-air MWC) or at substoichiometric levels (modular starved-air MWC). In the excess-air designs, excess air (above stoichiometric levels) is introduced into the primary chamber. Additional air needed to promote mixing and complete burnout may be added in the secondary chamber. In this design, the secondary chamber provides additional residence time for mixing and for completing combustion. This design is functionally similar to larger mass burn MWC's. In the starved-air designs, sufficient air is supplied to the primary combustion chamber to volatilize combustible materials in the waste while minimizing entrainment of fuel particles and ash in the flue gas. The incomplete combustion products and particulates then pass into the secondary combustion chamber where additional air is added to complete combustion. Most modular MWC's have refractory-lined combustion chambers. Although many existing modular MWC's do not have heat recovery, the majority of new modular MWC's are expected to recover energy with waste heat boilers.

The third class of MWC burns pretreated and shredded municipal waste, broadly referred to as RDF. The degree of pretreatment used in RDF production can vary from simple removal of bulky items accompanied by shredding of the remaining waste to extensive pretreatment to produce a finely divided fuel containing relatively little noncombustible material. The RDF



is generally fed with a stoker onto a moving grate. Some RDF MWC's are designed to combust only RDF, while others combust a mixture of RDF and other fuels such as wood or coal. In addition, a few boilers initially designed to combust pulverized coal may add some RDF as a supplemental fuel. Most RDF MWC's are medium to large size MWC's ranging in size from 270 to 900 Mg/day (300 to 1,000 tons/day) capacity. Plants typically have two to four MWC's, and RDF plant sizes range from 550 to 3,600 Mg/day (600 to 4,000 tons/day) capacity. Virtually all new RDF MWC's are constructed of waterwalls and employ heat recovery.

The last class of MWC's is FBC MWC's. In FBC, the waste burns in a turbulent bed of heated noncombustible material (generally sand or limestone). There are two basic types of FBC systems: bubbling-bed combustors and circulating-bed MWC's. Both burn RDF, sometimes mixed with other fuels. With bubbling-bed MWC's, most of the fluidized solids are maintained near the bottom of the MWC by using relatively low fluidization velocities. This helps prevent the entrainment of solids from the bed into the flue gas. Circulating-bed MWC's operate at relatively high fluidization velocities to promote entrainment of solids into the upper section of the MWC. Combustion occurs in both the bed and upper section of the MWC. The entrained fraction of the bed material enters a cyclone separator which recycles most of the unburned waste and inert particles to the lower bed. Typical FBC MWC sizes for planned units are 180 to 450 Mg/day (200 to 500 tons/day), and plant sizes range from 270 to 900 Mg/day (300 to 1,000 tons/day) capacity. As with other RDF MWC's, new FBC MWC's employ heat recovery.

**Emission Control Technologies for MWC Emissions:** There are basically three methods of controlling emissions from MWC's. One method involves separation of materials prior to combustion, and exclusion of certain materials from combustion. A second method is to alter the combustion process to reduce emissions of MWC organics [referred to as good combustion practices (GCP)]. The third method is adding pollution control equipment after the MWC to control emissions of MWC metals and MWC acid gases, and to obtain additional MWC organics control. The use of GCP and add-on air pollution control devices (APCD's) is discussed below. Materials separation is described in Section V of this preamble.

**Good Combustion Practices:** Good combustion practices include the proper

design, construction, operation, and maintenance of an MWC. Municipal waste combustor organic emissions may originate from the feed waste or fuel, reactions occurring in the combustion chamber, or reactions on the surface of PM at temperatures from 250° to 400 °C (480° to 750 °F). The use of GCP reduces MWC organic emissions, including emissions of dioxins/furans and their precursors, by promoting more thorough combustion of these pollutants.

Important factors in MWC design and operation that reduce MWC organic emissions include: maintaining uniform waste feed rates and conditions; the use of preheated air to burn wet or difficult to combust materials; maintaining adequate combustor temperature and residence time; providing proper total combustion (excess) air levels; supplying proper amounts and distributions of primary (underfire) and secondary (overfire) air; minimizing PM carryover; monitoring degree of waste burnout; and the use of auxiliary fuel during startup and shutdown.

Carbon monoxide concentration in the combustor flue gas is a good indicator of combustion efficiency and high MWC organic (i.e., dioxin/furan) emissions are associated with poor combustion. The techniques employed to minimize CO are closely related to those employed to minimize MWC organic emissions. Thus, if high levels of CO are present in combustor flue gases, it is likely that significant quantities of MWC organic emissions are also present.

Combustor load is also related to MWC organic emissions. At loads above 100 percent, PM carryover would increase and furnace residence times would decrease, contributing to increased MWC organic (i.e., dioxin/furan) emissions at high loads. The maximum load would be established for each MWC during its compliance test.

According to available information, MWC organics (i.e., dioxins/furans) form on fly ash in the presence of excess oxygen at temperatures in the range of 250 to 400 °C (480 to 750 °F), with maximum formation rates occurring at about 300 °C (570 °F). Available data indicate that cooling flue gases and operating the PM control device at temperatures of 230 °C (450 °F) or less prevents formation of MWC organics (i.e., dioxins/furans) in the flue gas. Flue gas cooling is typically accomplished by the economizer at MWC's with heat recovery capability, but could also be accomplished by other methods such as humidification.

Proper operation of combustors is key to GCP. Operation of MWC's is complex, and as mentioned above, there

are many interrelated parameters that influence emissions. Since only a few parameters such as combustor CO emissions, load, and flue gas temperature, can be specified and measured in emission standards, operator certification and training is another element of GCP. The American Society of Mechanical Engineers (ASME) has developed a certification program that consists of an initial provisional certification followed by full operator certification. To obtain provisional certification, a candidate must demonstrate that certain requirements of experience and education have been met and must pass a written examination covering the basics of municipal waste combustion. The initial provisional certificate, which is valid for 5 years, would not be specific for any particular MWC technology or jurisdiction.

After attaining a provisional certification and gaining 6 months of experience at a particular MWC facility, a chief facility operator or shift supervisor may pursue an operator certification. This certificate would be issued upon passing a site-specific oral examination on the operation, maintenance, and safety procedures at the facility. Operator certificates would be valid only for facilities of similar size and technology. They would be valid for 3 years and may be renewed upon demonstration that the operator has maintained knowledge of the particular MWC and permit requirements. New certificates would be required upon transfer to a facility of a different size or technology. The ASME certification would ensure national consistency and would allow individuals to transfer their certification from one State to another. In addition, all plant personnel who are in positions associated with the combustion process—including the control room operators, ash handlers, personnel involved with MWC maintenance, crane/load operators, and any other persons associated with MWC operation should receive training in MWC operation on a yearly basis. Such training is best provided through use of a training manual which focuses on how each subject area, or component of combustor operation, can impact combustor performance and emissions. In addition, the manual should specify remedial measures that are effective in regaining good performance during startups, shutdowns, and malfunctions of the MWC. As with any routine training program, the training manual should be revised as appropriate from time to time to reflect any changes.



The following training elements should be included in any training manual.

**Introduction.** This portion of the manual should include an explanation of the regulation applicable to MWC emissions and how certain MWC operating procedures (which would be discussed in detail later in the manual) would be followed in order to maintain compliance with the standards and to achieve GCP.

**Basic Combustion Theory.** This portion of the manual should address the interrelationships of flue gas, temperature, residence time, and fuel/air mixing and their effects on combustion performance and destruction of trace organics including dioxins/furans.

**Procedures for Receiving, Handling, and Feeding Waste.** This portion of the manual should address which specific types of MSW should be eliminated from the waste stream because of their physical and chemical characteristics (e.g., oversized, bulky wastes that can jam feed hoppers; explosive or hazardous wastes such as propane tanks) and materials that cannot be combusted. These wastes may contribute to upsets which result in excessive CO or MWC organic (i.e., dioxin/furan) emissions. Because the loader/crane operator can help maintain the stability of the combustion process by thoroughly mixing incoming feed material to blend wastes with high and low moisture contents and heating values, this portion of the manual also should include a discussion of the proper waste feed rates and feed uniformity, and their effect on combustion stability. Maintaining combustion stability would aid in achieving continuous reductions in MWC organic emissions.

**Startup and Shutdown Procedures.** Because higher levels of MWC organic emissions can occur during startup and shutdown due to low combustion temperatures and poor mixing, the training manual should set forth specific procedures for minimizing the effects of these episodes. This portion of the manual should include the requirement to fire auxiliary fuel during startup and shutdown.

**Auxiliary Fuel Use.** Some MWC's fire auxiliary fuel during conditions other than startup and shutdown (e.g., to maintain steam load during waste feed interruptions). Thus, this portion of the manual should address how changes in operation, such as combustion airflow rates and distributions, may be necessary when firing auxiliary fuels.

**Maintaining Proper Combustion Air Supply Levels.** Providing the proper

amount and distribution of underfire (or primary) air is important in maintaining proper combustor temperatures and stoichiometries and reducing emissions of organics and particulates from the combustor. This is especially important for modular MWC's with primary chambers designed to operate at substoichiometric conditions. As feed rates and waste properties change, it is sometimes necessary to adjust primary air distributions to maintain local stoichiometries. This portion of the manual should address what adjustments are needed depending on the specific MWC design type. In addition, this portion of the manual should also highlight the need for proper operation of overfire (or secondary) air because it plays a major role in the mixing process and the destruction of MWC organics. Again, secondary air design and operating practices will vary depending on the specific MWC design type. Because air preheat (used to assist in the combustion of high moisture, low heating value wastes) can affect the ability of a combustor to achieve good combustion, this portion of the manual should also instruct the operator to anticipate this potential problem and how to adjust or initiate air preheat as a corrective action.

**Upset or Off-Specification Conditions.** This portion of the manual should provide the operator with guidance on implementing corrective action in response to a number of periodic process upsets, including, but not limited to, low (or excessive) furnace temperatures, high CO levels, high (or low) operating load, high (or insufficient) flue gas cleaning device inlet temperatures, and poor waste burnout conditions.

**Minimization of Particulate Matter Carryover.** This portion of the manual should address the problem of PM carryover and instruct the operator how to minimize PM carryover within normal operating parameters. High levels of PM carryover may increase PM concentrations in the flue gas and may contribute to downstream formation of MWC organics (i.e., dioxins/furans).

**Performance of GCP: Use of GCP,** including exhaust gas cooling to 230 °C (450 °F), in conjunction with PM control can achieve dioxin/furan emission levels of 300 ng/Nm<sup>3</sup> (120 gr/billion dscf) or less for new MWC's, except RDF combustors. Levels of 1,000 ng/Nm<sup>3</sup> (400 gr/billion dscf) can be achieved at RDF combustors.

**Add-on Controls:** The most frequently used PM control devices for MWC's are electrostatic precipitators (ESP's) and fabric filters (FF's). Although other PM control technologies (such as cyclones,

electrified gravel beds, and venturi scrubbers) have been used, they are infrequently applied on current systems, and they are not expected to be used in future MWC systems.

In ESP's, flue gas flows between a series of high voltage discharge electrodes and grounded metal plates. Negatively charged ions formed by this high voltage field (known as a "corona") attach to PM in the flue gas, causing the charged particles to migrate toward the grounded plates. Once the charged particles are collected on the grounded plates, the resulting dust layer is removed from the plates by rapping, washing, or some other method and collected in a hopper. The most common types of ESP's used by MWC's are: (1) plate-wire units in which the discharge electrode is a bottom-weighted or rigid wire and (2) flat plate units which use flat plates rather than wires as the discharge electrode.

Fabric filters (also called baghouses) are becoming increasingly common for particulate control at MWC's, particularly when used in combination with acid gas control. Fabric filters are of two basic designs, reverse-air and pulse jet. In a reverse-air FF, flue gas flows through unsupported filter bags, leaving the particulate on the inside of the bags. The particulate builds up to form a particulate filter cake. When the pressure drop across the filter cake reaches a defined limit, flue gas flow is stopped and clean air is directed through the filter in the opposite direction, the filter bag collapses, and the filter cake falls off and is collected at the bottom of the hopper. Following cleaning, flue gas is again directed through the clean filter bags and the cycle is repeated. In a pulse jet FF, flue gas flows through supported filter bags leaving particulate on the outside of the bags. To remove the built-up particulate filter cake, a pulse of compressed air is introduced inside of the filter bag, the filter bag expands and the filter cake falls off and is collected. The pulse jet system may be cleaned while on-line or off-line.

Well-designed and operated ESP's or FF's can reduce total PM emission levels to 34 mg/dscm (0.015 gr/dscf) or less at 7 percent oxygen (O<sub>2</sub>).

Municipal waste combustor metals emissions include arsenic, beryllium, cadmium, chromium, lead, mercury, and nickel. All of these metals, except mercury, are removed with the fine particulates collected by ESP's or FF's. Well-designed ESP's or FF's operated at 230 °C (450 °F) or less remove over 97 percent of arsenic, cadmium, and lead and about 99 percent of beryllium,



chromium, and nickel from MWC exhaust.

In general, little or no mercury control has been observed at MWC's with particulate matter controls alone (i.e., no acid gas controls).

Control of acid gases ( $\text{SO}_2$  and  $\text{HCl}$ ) can be achieved by injection of dry or slurried alkali sorbents (e.g., lime) into the flue gas.

Available acid gas control technologies include addition of dry sorbents into the flue gas duct or into the combustor, and spray drying. Acid gas controls are typically followed by an ESP or a FF. Two levels of acid gas control were considered in developing regulatory alternatives. These are dry sorbent injection (DSI)/PM control (ESP or FF) systems that provide an intermediate level of control, and spray dryer (SD)/FF systems that provide greater control. These two levels are discussed below.

Dry sorbent injection technologies have been developed primarily to control acid gas emissions. However, when DSI is combined with flue gas cooling to  $150^\circ\text{C}$  ( $300^\circ\text{F}$ ) or below an ESP or FF, control of MWC organics (dioxins/furans), MWC metals, and MWC acid gas emissions is achieved. If new plants apply DSI technology, it is expected that DSI/FF systems rather than DSI/ESP systems will be more commonly used, since the emission control performance of DSI/FF systems is generally better than that of DSI/ESP systems, and the costs of DSI/FF's are similar to, and in some cases lower than, the costs of DSI/ESP systems. Two primary subsets of DSI technologies exist, duct sorbent injection and furnace sorbent injection.

In duct sorbent injection, powdered sorbent is pneumatically injected into either a separate reaction vessel or a section of the flue gas duct located downstream of the combustor economizer or quench tower. The sorbent reacts with acid gases to form alkali salts. By lowering the acid content of the flue gas, downstream equipment can be operated at reduced temperatures while minimizing the potential for acid corrosion of equipment. Reaction products, fly ash, and unreacted sorbent are collected with the ESP or FF. Available sorbents include hydrated lime ( $\text{Ca}(\text{OH})_2$ ), soda ash ( $\text{NaOH}$ ), and sodium bicarbonate ( $\text{NaHCO}_3$ ).

Furnace sorbent injection involves the injection of powdered alkali sorbents into the furnace section of a combustor. This can be accomplished by addition of sorbent to the overfire air, injection through separate ports, or mixing with the waste prior to feeding to the

combustor. As with duct sorbent injection, reaction products, fly ash, and unreacted sorbent are collected using an ESP or FF. Furnace sorbent injection is not expected to be widely used for new MWC's, and is mainly a retrofit option for existing MWC's that may have limited space for a duct injection system.

Dry sorbent injection/fabric filter or DSI/ESP systems can achieve either a 50 percent reduction in  $\text{SO}_2$  emissions or an outlet  $\text{SO}_2$  concentration of 30 ppmv at 7 percent  $\text{O}_2$  (24-hour average basis). Either an 80 percent reduction in  $\text{HCl}$  emissions or an outlet concentration of 25 ppmv is also achievable by DSI/FF or DSI/ESP systems on new MWC's (based on duct sorbent injection). Furnace sorbent injection systems may achieve a lower percent  $\text{HCl}$  removal relative to  $\text{SO}_2$  removal.

All types of new MWC's (except RDF's) with DSI/FF or DSI/ESP systems can meet a dioxin/furan emission limit of  $75\text{ ng/Nm}^3$  (30 gr/billion dscf) (at 7 percent  $\text{O}_2$ ). New RDF's with DSI/FF or DSI/ESP systems can meet a dioxin/furan emission limit of  $250\text{ ng/Nm}^3$  (100 gr/billion dscf) (at 7 percent  $\text{O}_2$ ).

A PM emission limit of 34 mg/dscm ( $0.015\text{ gr/dscf}$ ) is achievable for new MWC's equipped with DSI/ESP or DSI/FF. Dry sorbent injection/ESP or FF systems achieve 97 percent or greater removal of arsenic, cadmium, and lead, and 99 percent removal of beryllium, chromium, and nickel. In addition, DSI/ESP systems typically achieve about 30 percent removal of mercury and DSI/FF systems typically achieve a higher percent removal of mercury. However, the data on mercury emissions and control levels are highly variable among MWC's.

Lime spray drying followed by a FF is a higher performance technology than current DSI/ESP or DSI/FF technology and was initially developed to control acid gas emissions. However, the system also controls emissions of MWC organics (dioxins/furans) and MWC metals. In the spray drying process, atomized lime slurry is injected into a SD vessel; the water in the slurry evaporates to cool the flue gas and the lime reacts with acid gases to form salts that can be removed by the FF. The key design and operating parameters that significantly affect SD performance are SD outlet temperature and lime-to-acid gas stoichiometric ratio. The SD outlet temperature is controlled by the amount of water in the slurry. More effective acid gas removal occurs at lower temperatures, but the temperature must be kept high enough to ensure that the slurry and reaction products are adequately dried prior to collection in

the FF. Spray dryer systems generally operate at temperatures of  $150^\circ\text{C}$  ( $300^\circ\text{F}$ ) or less. For MWC flue gas containing significant amounts of chlorine, a minimum SD outlet temperature of around  $115^\circ\text{C}$  ( $240^\circ\text{F}$ ) is required to control agglomeration of PM and sorbent by calcium chloride.

Spray dryer/FF systems on new MWC's can achieve either an 85 percent reduction in  $\text{SO}_2$  emissions or an outlet  $\text{SO}_2$  concentration of 30 ppmv at 7 percent  $\text{O}_2$  (24-hour average basis). Either a 95 percent reduction in  $\text{HCl}$  emissions or an outlet  $\text{HCl}$  concentration of 25 ppmv is also achievable by SD/FF systems on new MWC's.

Spray dryer/FF systems also achieve outlet dioxin/furan concentrations in the range of  $5\text{ ng/Nm}^3$  (2 gr/billion dscf) to about  $30\text{ ng/Nm}^3$  (12 gr/billion dscf) (at 7 percent  $\text{O}_2$ ). The SD/FF systems are the most effective add-on control systems for dioxins/furans, and achieve 99 percent control and low outlet emission levels, however, the exact performance level has not been specified in the proposed standards. Measured emission levels vary among MWC's, and additional test data from new MWC's with SD/FF controls are currently being collected and analyzed. The exact dioxin/furan emission level achievable by SD/FF controls will be determined prior to promulgation, and a single emission level will be included in the promulgated standards. Specific comments are solicited on what the final emission limit should be.

A PM emission limit of 34 mg/dscm ( $0.015\text{ gr/dscf}$ ) is achievable by all MWC's equipped with SD/FF systems. At this PM emission level, SD/FF systems achieve 99 percent removal of all metals except mercury.

The observed removal efficiencies for mercury vary widely among MWC's with SD/FF controls showed over 70 percent mercury removal rates and outlet concentrations below 200 micrograms ( $\mu\text{g}$ )/dscm (85 gr/million dscf). On the other hand, compliance test data from three other MWC's with SD/FF systems indicated little or no mercury control. One of these three MWC's, however, was retested later and results indicated over 75 percent control. It has been postulated that mercury emissions may be related to nitrogen oxide ( $\text{NO}_x$ ) control, and that use of ammonia injection for  $\text{NO}_x$  control may reduce mercury control in some cases. However, another possibility is that the adsorption and removal of mercury may be dependent on carbon in the fly ash. Review of data from tests of MWC's with and without  $\text{NO}_x$  control tend to



show that combustors with very good combustion and very low concentrations of organics and PM in the flue gas upstream of the SD/FF filter achieve lower mercury removal. This may be because there is little carbon in the fly ash onto which mercury can adsorb for subsequent removal by the FF. Other explanations for the observed variation in mercury control are also possible. A joint EPA/industry task force is being established to investigate mercury emissions and controls. Their finding will be considered in development of the final standards.

Spray dryer/ESP systems have been used on a few MWC's. Available data indicate that these systems may achieve less removal of MWC acid gas, MWC organic, and mercury emissions than SD/FF systems. This issue will continue to be investigated, following proposal, and comments on the performance of SD/ESP systems are requested.

A third MWC control method includes MSW materials separation, which is the separation of certain components from the waste stream prior to combustion in an MWC. This technique is less commonly used than GCP or add-on air

pollution control. Additional reductions in MWC emissions, including mercury emissions, may be achieved with application of materials separation as discussed in Section V.

**Regulatory Alternatives for MWC Emissions:** Five regulatory alternatives were considered in selecting MWC emissions standards for proposal. A baseline alternative is also presented which represents the level of emissions control expected in the absence of the proposed NSPS. For all new MWC's, the baseline control level would include GCP and, except for MWC's with capacities below 45 Mg/day (50 tons/day), PM control of 115 or 180 mg/dscm (0.050 or 0.080 gr/dscf) as required by Subpart Db or E, respectively.

The five regulatory alternatives considered in developing standards for MWC's represent varying levels of control for MWC organics (dioxins/furans), MWC metals (as indicated by PM), and MWC acid gases (including HCl and SO<sub>2</sub>). These regulatory alternatives also subdivide MWC plants into two size categories. It is reasonable to categorize MWC's into large and small plants because: (1) large plants

have greater emissions potential and account for over 90 percent of planned capacity and (2) control cost increases associated with the various control technologies are noticeably greater on the bases of percent of MWC capital cost and dollars per ton of MSW combusted for small plants. Therefore, some of the regulatory alternatives require less stringent control of small plants. The proposed standards would define small MWC plants as those with aggregate capacities below 225 Mg/day (250 tons/day). The EPA requests comment on whether another size category cutoff might be more appropriate.

Table 2 presents the five regulatory alternatives in terms of control technologies that serve as the basis for selecting the alternative. Table 3 presents these five regulatory alternatives in terms of the emission limits for dioxins/furans, PM, and acid gases that could be specified in a regulation, and Table 4 presents GCP operating standards. (See Sections V and VI for discussion of materials separation and NO<sub>x</sub> regulatory alternatives, respectively).

TABLE 2.—TECHNOLOGICAL BASIS FOR REGULATORY ALTERNATIVES FOR MWC EMISSIONS FROM NEW MWC UNITS

Regulatory alternative	Control requirements by total MWC plant capacity Mg MSW/day (tons MSW/day)	
	Small plants <225 Mg/day (<250 tons/day)	Large plants >225 Mg/day (>250 tons/day)
I.....	GCP.....	GCP
IIA.....	PM control to 0.080.....	PM control to 0.015
IIIB.....	GCP.....	GCP
IIIB.....	PM control to 0.080.....	MWC acid gas by DSI
IIIB.....	GCP.....	PM control to 0.015
IIIB.....	MWC acid gas by DSI.....	GCP
IIIB.....	PM control to 0.015.....	MWC acid gas by DSI
III.....	GCP.....	PM control to 0.015
III.....	PM control to 0.080.....	GCP
III.....	GCP.....	MWC acid gas by SD/FF
IV.....	GCP.....	PM control to 0.015
IV.....	MWC acid gas by DSI.....	GCP
IV.....	PM control to 0.015.....	MWC acid gas by SD/FF
IV.....		PM control to 0.015

TABLE 3.—POTENTIAL MWC EMISSION LIMITS ASSOCIATED WITH 111(B) REGULATORY ALTERNATIVES

Regulatory alternative	Control levels by plant capacity	
	Small plants <225 Mg/day (<250 tons/day)	Large plants <225 Mg/day (<250 tons/day)
I.....	Dioxins/furans.....	300 ng/Nm <sup>3</sup> (1,000 ng/Nm <sup>3</sup> )
I.....	PM.....	0.015 gr/dscf
I.....	HCl.....	no limit
I.....	SO <sub>2</sub> .....	no limit
I.....	GCP/Operating Standards.....	See Table 4
IIA.....	Dioxins/furans.....	300 ng/Nm <sup>3</sup> (1,000 ng/Nm <sup>3</sup> )
IIA.....	PM.....	0.080 gr/dscf
IIA.....	HCl.....	no limit
IIA.....	SO <sub>2</sub> .....	no limit
IIA.....	GCP/Operating Standards.....	See Table 4
IIIB.....	Dioxins/furans.....	75 ng/Nm <sup>3</sup> (250 ng/Nm <sup>3</sup> )
IIIB.....	PM.....	0.015 gr/dscf
IIIB.....	HCl.....	80 percent or 25 ppmv
IIIB.....	SO <sub>2</sub> .....	50 percent or 30 ppmv
IIIB.....	GCP/Operating Standards.....	See Table 4
III.....	Dioxins/furans.....	300 ng/Nm <sup>3</sup> (1,000 ng/Nm <sup>3</sup> )
III.....		5 to 30 ng/Nm <sup>3</sup>



TABLE 3.—POTENTIAL MWC EMISSION LIMITS ASSOCIATED WITH 111(B) REGULATORY ALTERNATIVES—Continued

Regulatory alternative		Control levels by plant capacity	
		Small plants <225 Mg/day (<250 tons/day)	Large plants <225 Mg/day (<250 tons/day)
IV	PM	0.080 gr/dscf	0.015 gr/dscf
	HCl	no limit	95 percent or 25 ppmv
	SO <sub>2</sub>	no limit	85 percent or 30 ppmv
	GCP/Operating Standards	See Table 4	See Table 4
	Dioxins/furans	75 ng/Nm <sup>3</sup> (250 ng/Nm <sup>3</sup> )	5 to 30 ng/Nm <sup>3</sup>
	PM	0.015 gr/dscf	0.015 gr/dscf
	HCl	80 percent or 25 ppmv	95 percent or 25 ppmv
	SO <sub>2</sub>	50 percent or 30 ppmv	85 percent or 30 ppmv
	GCP/Operating Standards	See Table 4	See Table 4

\* Emission levels in ( ) are for RDF MWC's.

TABLE 4.—EMISSION AND OPERATING PARAMETER LIMITS FOR GCP

Pollutant or parameter	Limit
Maximum load level	100 percent of demonstrated capacity
Maximum temperature at PM control device inlet	230°C (450°F)
CO Emissions:	
Modular MWC's	50 ppmv
Mass burn waterwall	100 ppmv
Mass burn refractory	100 ppmv
Fluidized bed combustor	100 ppmv
Mass burn rotary waterwall	150 ppmv
RDF spreader stoker	150 ppmv
Coal/RDF cofired	150 ppmv
Operator certification and training	All operators certified by ASME. Training manual and training for other personnel.

Regulatory Alternative I, the least stringent nonbaseline regulatory alternative shown in Table 2, would require emission reductions to levels achievable with GCP for plants of all sizes and various levels of PM control depending on plant size. For small plants (i.e., those MWC's located at plants with aggregate capacities equal to or less than 225 Mg/day [250 tons/day] of MSW), PM emission limits correspond to a level of 180 mg/dscm (0.080 gr/dscf). This is the same level currently required under subpart E for MWC's larger than 45 Mg/day (50 tons/day) capacity. However, under Regulatory Alternative I this same level would be applied to all MWC's located at small MWC plants with no lower size cutoff. Municipal waste combustors located at large MWC plants (i.e., those with aggregate capacities of greater than 225 Mg/day [250 tons/day] of MSW) would be required to achieve PM control to 34 mg/dscm (0.015 gr/dscf). No add-on acid gas controls would be required for any plant under this alternative. Based on use of GCP and PM control, emissions of dioxins/furans would be reduced to 1,000 ng/Nm<sup>3</sup> (400 gr/billion dscf) at RDF MWC's and to 300 ng/Nm<sup>3</sup>

(120 gr/billion dscf) at all other types of MWC's. The PM controls required would achieve significant reductions in metals emissions (with the exception of mercury), and the higher costs of acid gas controls would not be incurred.

Regulatory Alternative IIA is more stringent than Regulatory Alternative I. Municipal waste combustors at large MWC plants would be required to reduce emissions to levels achievable with moderate acid gas add-on control (based on DSI/FF or DSI/ESP control). Control requirements and emission levels for MWC's located at small MWC plants would be the same as Regulatory Alternative I. For MWC's at large MWC plants, which have greater annual emissions potential, MWC acid gas control based on DSI/FF or DSI/ESP (50 percent SO<sub>2</sub> and 80 percent HCl control) and PM control to 34 mg/dscm (0.015 gr/dscf) would be required, reducing dioxin/furan emissions to 250 ng/Nm<sup>3</sup> (100 gr/billion dscf) for RDF MWC's at large plants and to 75 ng/Nm<sup>3</sup> (30 gr/billion dscf) for all other types of MWC's at large plants. Under Regulatory Alternative IIA, small plants would be allowed a lower cost and less efficient dioxins/furans control (GCP), which would avoid the relatively greater cost impacts of add-on acid gas controls for smaller MWC plants.

Regulatory Alternative IIB would require emission reductions to levels achievable with GCP, acid gas control based on DSI/FF or DSI/ESP, and PM control to 34 mg/dscm (0.015 gr/dscf) for all MWC plants (both large and small). This alternative would result in reduction of dioxins/furans emissions as well as reductions in acid gas emissions for all MWC plants, but has higher costs for small plants than Regulatory Alternatives I or IIA.

Regulatory Alternative III is similar to regulatory Alternative IIA by not requiring acid gas control at small MWC plants; but it would require emission levels based on GCP, acid gas control based on SD/FF (85 percent SO<sub>2</sub> and 95 percent HCl control), and PM control to

34 mg/dscm (0.015 gr/dscf) on MWC's at large MWC plants, reducing dioxin/furan emissions to a level in the range of 5 to 30 ng/Nm<sup>3</sup> (2 to 12 gr/billion dscf) for large plants. The exact emission limit within this range that is achievable with SD/FF control will be determined prior to promulgation. Compared to Regulatory Alternative IIB, this alternative would require more stringent control of large MWC plants, but less stringent control of small MWC plants. Municipal waste combustors at small plants would be required to achieve emission levels based on use of GCP plus PM control to 180 mg/dscm (0.080 gr/dscf), but no acid gas controls.

Regulatory Alternative IV is the most stringent alternative analyzed. Like Regulatory Alternative III, Regulatory Alternative IV is based on MWC emission levels achievable with GCP, acid gas control based on SD/FF (85 percent SO<sub>2</sub> and 95 percent HCl control), and PM control to 34 mg/dscm (0.015 gr/dscf) for large MWC plants. For small plants, MWC emission levels corresponding to GCP, acid gas control based on DSI/FF or DSI/ESP (50 percent SO<sub>2</sub> and 80 percent HCl control), and PM control to 34 mg/dscm (0.015 gr/dscf) would be required. The requirements for small MWC plants are, therefore, more stringent than under Regulatory Alternative III. Regulatory Alternative IV has the lowest emissions but the highest cost of any of the regulatory alternatives presented.

*Model Plant Impacts of the Regulatory Alternatives for MWC Emissions:* Table 3 shows the air pollutant emission concentration or percent reduction limits for small and large MWC plants under each regulatory alternative and Table 4 shows GCP operating requirements. In Tables 5 and 6, the ranges of individual small and large model plant emissions and emission reductions of PM, dioxins/furans, and MWC acid gases (SO<sub>2</sub> and HCl) under the baseline and the regulatory alternatives are presented.



These emission impacts were derived by applying the different control technologies to small and large MWC

plants as specified by the regulatory alternatives. They are expressed as ranges to represent the different types

and sizes of MWC's within the small and large MWC plant categories.

TABLE 5.—RANGE OF MWC EMISSIONS FOR INDIVIDUAL SMALL MWC PLANTS UNDER THE BASELINE AND REGULATORY ALTERNATIVES FOR MWC EMISSIONS

Regulatory alternative	Annual emissions			
	MWC metals PM Mg/year	MWC organics dioxin/furan g/year	MWC acid gases	
			SO <sub>2</sub> Mg/year	HCl Mg/year
Baseline	9-57	12-62	23-170	31-240
I	7-57	12-62	23-170	31-240
IIA	7-57	12-62	23-170	31-240
IIB	1-7	3-16	14-100	6-48
III	7-57	12-62	23-170	31-240
IV	1-7	3-16	14-100	6-48

TABLE 6.—RANGE OF MWC EMISSIONS FOR INDIVIDUAL LARGE MWC PLANTS UNDER THE BASELINE AND REGULATORY ALTERNATIVES FOR MWC EMISSIONS

Regulatory alternative	Annual emissions			
	MWC metals PM Mg/Year	MWC organics dioxin/furan g/year	MWC acid gases	
			SO <sub>2</sub> Mg/year	HCl Mg/year
Baseline	33-360	29-640	364-2,400	497-2,400
I	15-73	29-690	364-2,400	497-2,400
IIA	15-73	22-160	57-1,400	99-480
IIB	15-73	22-160	57-1,400	99-480
III	15-73	3.2-16	36-240	15-73
IV	15-73	3.2-16	36-240	15-73

As shown in Table 5, PM emissions from small MWC plants (i.e., those with capacities equal to or less than 225 Mg/day [250 tons/day]) range from 9 to 57 Mg/year (10 to 63 tons/year) at baseline. Regulatory Alternatives I, IIA, and III require small plants to achieve PM levels of 180 mg/dscm (0.080 gr/dscf). Under Regulatory Alternatives I, IIA, and III only those model plants with MWC capacities less than 45 Mg/day (50 tons/day) would be required to add additional PM controls since MWC's greater than or equal to 45 Mg/day (50 tons/day) would already be controlled to a PM level of 180 mg/dscm (0.080 gr/dscf) at baseline under subpart E. The additional PM controls required under Regulatory Alternatives I, IIA, and III for MWC's with capacities less than 45 Mg/day (50 tons/day) would result in PM reductions of about 22 percent for those very small MWC's. Under Regulatory Alternatives IIB and IV, which require all MWC plants to achieve PM emission levels of 34 mg/dscm (0.015 gr/dscf), all small plants would apply traditional controls, resulting in PM emissions ranging from 1 to 7 Mg/year (1 to 8 tons/year). These emissions represent about 90 percent reduction in PM emissions as compared to baseline emissions.

At baseline, dioxin/furan emissions at small MWC plants would range from 12

to 62 g/year (0.026 to 0.14 lbs/year). No reductions would be achieved for small plants under Regulatory Alternatives I, IIA, or III since GCP are employed at baseline and there are no MWC acid gas control requirements for small plants under these alternatives. Under Regulatory Alternatives IIB and IV, acid gas controls would be required for small plants, thereby reducing dioxin/furan emissions by 75 percent and resulting in emissions ranging from 3 to 16 g/year (0.007 to 0.035 lbs/year).

At baseline, SO<sub>2</sub> emissions at small MWC plants would range from 23 to 170 Mg/year (25 to 190 tons/year), and HCl emissions would range from 31 to 240 Mg/year (34 to 260 tons/year). Since MWC acid gas controls are not required for small plants under Regulatory Alternatives I, IIA, or III, no reductions in MWC acid gases would be achieved under these alternatives. Municipal waste combustor acid gas controls based on DSI technology would be required for small MWC plants under Regulatory Alternatives IIB and IV. Municipal waste combustor acid gas emissions (SO<sub>2</sub> and HCl combined) would be reduced by almost 70 percent. Under Regulatory Alternatives IIB and IV, SO<sub>2</sub> emissions at small MWC plants range from 14 to 100 Mg/year (15 to 120

tons/year), and HCl emissions range from 6 to 48 Mg/year (7 to 53 tons/year).

Table 6 shows the ranges of emission impacts for large MWC plants (i.e., those with aggregate capacities of greater than 225 Mg/day [250 tons/day]) under the baseline and the regulatory alternatives. At baseline, PM emissions at large MWC plants would range from 33 to 360 Mg/year (36 to 400 tons/year). This is an emission level equivalent to about 115 mg/dscm (0.050 gr/dscf) for most plants as required by subpart Db. Large MWC plants would be required to meet PM emission levels of 34 mg/dscm (0.015 gr/dscf) under each of the regulatory alternatives. Under Regulatory Alternatives I through IV, PM emissions would range from 15 to 73 Mg/year (16 to 80 tons/year) resulting in PM emission reductions of about 80 percent relative to baseline emissions for most large MWC plants.

Baseline emissions of dioxins/furans at large MWC plants range from 29 to 640 g/year (0.06 to 0.7 lbs/year). No dioxin/furan reductions would be achieved under Regulatory Alternative I since GCP are employed at baseline, and no acid gas controls would be required under Regulatory Alternative I. Emissions of dioxins/furans would be reduced by about 75 percent at typical large MWC plants under Regulatory



Alternatives IIA and IIB due to the requirement of acid gas controls based on DSI. Under Regulatory Alternatives IIA and IIB, dioxin/furan emissions at large MWC plants would range from 22 to 160 g/year (0.05 to 0.36 lbs/year). Under Regulatory Alternatives III and IV, which require acid gas controls based on SD/FF technology, dioxin/furan emissions would be reduced by 99 percent relative to baseline emissions for typical MWC plants. Under the two most stringent alternatives, dioxin/furan emissions at large MWC plants would range from 3.2 to 16 g/year (0.007 to 0.036 lbs/year).

At baseline, emissions of SO<sub>2</sub> at large MWC plants range from 360 to 2,400 Mg/year (400 to 2,700 tons/year), and emissions of HCl range from 500 to 2,400

Mg/year (550 to 2,700 tons/year). No reductions in MWC acid gases would be achieved under Regulatory Alternative I since MWC acid gas controls are not required. Under Regulatory Alternatives IIA and IB, MWC acid gas controls based on DSI technology would be required for all large MWC plants. Under Regulatory Alternatives IIA and IIB, MWC acid gas emissions would be reduced by almost 70 percent relative to baseline. Sulfur dioxide emissions would range from 57 to 1,400 Mg/year (63 to 1,600 tons/year) and HCl emissions would range from 99 to 480 Mg/year (110 to 530 tons/year). Under the most stringent alternatives, Regulatory Alternatives III and IV, large MWC plants would be required to control MWC acid gas emissions to

levels based on SD/FF technology. Under Regulatory Alternatives III and IV, SO<sub>2</sub> emissions would be reduced by about 90 percent relative to baseline emissions, resulting in emissions ranging from 36 to 240 Mg/year (40 to 270 tons/year). This 90 percent long-term average emission reduction level is consistent with a minimum 24-hour average percent reduction of 85 percent. Emissions of HCl would be reduced 97 percent relative to baseline emissions and would range from 15 to 73 Mg/year (16 to 80 tons/year).

Tables 7 and 8 present the ranges of increased (over baseline) capital costs, total annualized costs, and total annualized cost per Mg MSW combusted for small and large MWC plants under each regulatory alternative.

TABLE 7.—RANGES OF INDIVIDUAL SMALL PLANT CONTROL COSTS UNDER THE REGULATORY ALTERNATIVES FOR MWC EMISSIONS

Regulatory Alternative	Capital cost (\$1,000)	Total annualized cost (\$1,000/yr)	Total annualized cost per Mg MSW combusted (\$/Mg)
Baseline	1,300–20,000	600–5,300	40–>100
I	<1–530	<1–140	<1–13
IIA	<1–530	<1–140	<1–13
IIB	1,100–1,400	510–680	9–47
III	<1–530	<1–140	<1–13
IV	1,100–1,400	510–680	9–47

TABLE 8.—RANGES OF INDIVIDUAL LARGE PLANT CONTROL COSTS UNDER THE REGULATORY ALTERNATIVES FOR MWC EMISSIONS

Regulatory alternative	Capital cost (\$1,000)	Total annualized cost (\$1,000/yr)	Total annualized cost per Mg MSW combusted (\$/Mg)
Baseline	40,000–150,000	13,000–37,000	40–>100
I	<1–1,300	<1–280	<1
IIA	450–7,800	1,100–4,600	4–12
IIB	450–7,800	1,100–4,600	4–12
III	8,600–20,000	2,600–6,600	8–17
IV	8,600–20,000	2,600–6,600	8–17

Table 7 shows that the base cost of the MWC's and control equipment included in the baseline would range from about \$1.3 million to \$20 million. Under Regulatory Alternatives I, IIA, and III, capital costs at individual small MWC plants could increase by less than \$1,000 to \$530,000; and additional annualized cost per unit of MSW combusted would range from a negligible increase to an increase of \$13/Mg MSW (\$12/ton MSW). Under these three alternatives, most small MWC plants would incur little or no additional costs; only those with capacities less than 45 Mg/day (50 tons/day) would incur increased control costs (relative to baseline) since these MWC's must add PM controls to meet the PM level of 180 mg/dscm (0.080 gr/dscf). For these very small plants, the capital costs of control represent an increase of about

42 percent relative to baseline combustor costs. For perspective on the increase in the annual cost of MSW combusted, typical costs for MSW combustion including collection, transportation, combustion, and MWC ash disposal currently range from about \$40/Mg (\$36/ton) to over \$100/Mg (\$90/ton) of MSW collected.

Under Regulatory Alternatives IIB and IV, small plants must add acid gas controls (based on DSI), and control costs increase. For Regulatory Alternatives IIB and IV, increased capital costs (relative to baseline) at small MWC's range from \$1.1 million to \$1.4 million or a percent increase of about 6 to 110 percent. Increased annualized costs of control range from \$510,000 to \$680,000, and the increased cost per unit of waste combusted ranges

from \$9 to \$47/Mg MSW (\$8 to \$43/ton MSW).

Table 8 shows the increased costs of control (relative to baseline for individual large MWC plants under the regulatory alternatives. Under Regulatory Alternative I, all large plants must meet a PM level of 34 mg/dscm (0.015 gr/dscf). Most plants would not achieve this level under the regulatory baseline and would have to add additional PM controls to meet this level. Under Regulatory Alternative I, increased capital costs (relative to baseline) range from negligible amounts to \$1.3 million, or an increase in capital cost of up to 2 percent. Increased annualized costs (relative to baseline) range from negligible to \$280,000, and increased cost per unit of MSW combusted is less than \$1/Mg MSW (\$1/ton MSW). Under Regulatory



Alternatives IIA and IIB, large MWC plants must add MWC acid gas controls based on DSI technology. For Regulatory Alternatives IIA and IIB, increased capital costs (relative to baseline) range from \$450,000 to \$7.8 million, increased annualized costs range from \$1.1 million to \$4.6 million, and increased cost per unit of MSW combusted ranges from \$4 to \$12/Mg MSW (\$4 to \$11/ton MSW). Control costs increase under Regulatory Alternatives III and IV for large MWC

plants since MWC acid gas controls based on SD/FF technology must be added. Under Regulatory Alternatives III and IV, increased capital costs (relative to baseline) for large MWC plants range from \$8.6 million to \$19.7 million, which is an increase of 11 to 22 percent. Increased annualized costs range from \$2.6 million to \$6.6 million, and increased cost per unit of waste combusted ranges from \$8 to \$17/Mg MSW (\$7 to \$15/ton MSW).

*National Impacts of the Regulatory Alternatives for MWC Emissions:* The national annual emissions (and the emission reductions relative to baseline emissions) of PM, dioxins/furans, and MWC acid gases (SO<sub>2</sub> and HCl) under the baseline and each of the regulatory alternatives are shown in Table 9. Acid gas (SO<sub>2</sub> and HCl) emissions account for the great majority of the total emission reduction for all alternatives except Regulatory Alternative I.

TABLE 9.—NATIONAL MWC EMISSIONS UNDER BASELINE AND THE REGULATORY ALTERNATIVES FOR MWC EMISSIONS

Regulatory alternative	Annual Emissions			
	MWC metals PM Mg/year	MWC Organics Dioxin/Furan kg/year	MWC Acid Gases	
			SO <sub>2</sub> Mg/year	HCl Mg/year
Baseline .....	7,500	15	42,000	49,000
I .....	2,300	15	42,000	49,000
IIA .....	2,300	5	24,000	13,000
IIB .....	1,600	4	23,000	10,000
III .....	2,300	1	6,800	4,900
IV .....	1,600	<1	5,600	2,100

As shown in Table 9, PM emissions at baseline are 7,500 Mg/year (8,300 tons/year). Reduction of 70 percent above baseline would be achieved under Regulatory Alternatives I, IIA, and III. Slightly greater PM emissions reductions (79 percent relative to the baseline) would be achieved under Regulatory Alternatives IIB and IV due to the addition of PM controls on small MWC plants. Under Regulatory Alternatives IIB and IV, national PM emissions would be reduced to 1,600 Mg/year (1,800 tons/year). All alternatives would achieve a high degree of metals control.

Baseline emissions of dioxins/furans are 15 kg/year (33 lbs/year). There would be no reductions of dioxins/furans under Regulatory Alternative I,

but increasing reductions of dioxins/furans would be achieved under Regulatory Alternatives IIA, IIB, III, and IV since MWC acid gas control requirements become more stringent with each successive alternative. Under Regulatory Alternative IV, national emissions of dioxins/furans for MWC plants would be 0.6 kg/year (1.4 lbs/year). This level represents a 96-percent reduction in dioxin/furan emissions relative to baseline emissions.

At baseline, national emissions of SO<sub>2</sub> and HCl are 42,000 Mg/year (46,000 tons/year), and emissions of HCl are 49,000 Mg/year (54,000 tons/year). No reductions in these MWC acid gases would be achieved under Regulatory Alternative I. Increasing reductions of

MWC acid gases would be achieved under Regulatory Alternatives IIA, IIB, III, and IV as acid gas control requirements become more stringent. Under Regulatory Alternative IV, SO<sub>2</sub> emissions would be reduced by 87 percent resulting in national SO<sub>2</sub> emissions of 5,600 Mg/year (6,200 tons/year). Emissions of HCl would be reduced by 96 percent resulting in national HCl emissions of 2,100 Mg/year (2,300 tons/year).

Table 10 shows the national total increased (over baseline) capital costs, total increased annualized cost, and overall increased annualized cost per unit of MSW combusted for each of the regulatory alternatives.

TABLE 10.—NATIONAL CONTROL COSTS UNDER THE REGULATORY ALTERNATIVES FOR MWC EMISSIONS

Regulatory alternative	Total capital cost (\$10 <sup>6</sup> )	Total annualized cost (\$10 <sup>6</sup> /yr)	Annualized cost per Mg MSW (\$/Mg)
I .....	28	6	0.44
IIA .....	170	96	6.90
IIB .....	200	110	7.60
III .....	470	140	10.40
IV .....	500	160	10.90

National increased costs given in this table are for new MWC plants that would be operating or under construction by the end of the fifth year of implementation of the NSPS. As shown in Table 10, national total increased capital cost (relative to

baseline) ranges from \$28 million under Regulatory Alternative I to \$500 million under Regulatory Alternative IV. Total increased annualized cost ranges from \$6 million/year under Regulatory Alternative I to \$170 million/year under Regulatory Alternative IV. Increased

annualized cost per unit of waste combusted ranges from \$0.45/Mg (\$0.40/ton) for Regulatory Alternative I to \$11/Mg (\$10/ton) for Regulatory Alternative IV. For perspective, tipping fees currently charged at MWC's for MSW received average about \$44/Mg (\$40/



ton) of MSW and range from less than \$10/Mg to over \$100/Mg. Disposal costs incurred by the general public (including MSW collection, transportation, combustion, and MWC ash disposal), however, typically range from \$40/Mg to over \$100/Mg.

**Economic Impacts of Regulatory Alternatives for MWC Emissions:** Other studies have considered impacts on households to be "severe" if annual compliance cost per household exceeds \$220 or if annual compliance cost per household exceeds 1 percent of median household income. Using these criteria, household impacts are not considered severe under any of the regulatory alternatives for MWC emissions. Under the most stringent alternative (Regulatory Alternative IV), over 90 percent of the household impacts were less than \$30 per year and less than 0.2 percent of median household income, although some of the household impacts in the smallest communities examined were near \$100 per year.

Economic impacts on government units (counties and municipalities) have been considered "severe" in other studies if both the following two conditions are met: (1) The sum of total current debt service and additional debt service associated with compliance to the regulation as a percent of total general revenues exceeds 15 percent, and (2) the sum of the average sewerage and sanitation cost per household and the average control cost per household as a percent of median household income exceeds 1 percent. Government

units have also been considered severely impacted if a third condition is met: (3) control costs as a percent of total general expenditures exceed 1 percent. Using these criteria, the analyses indicate that the increased costs imposed by any of the regulatory alternatives for control of MWC emissions do not result in severe economic impacts on the government units planning to construct new MWC facilities.

The EPA believes that these studies, which are also used by EPA in assessing impacts of the proposed RCRA Subtitle D standards, provide a reasonable measure for evaluating impacts, since the studies are specifically designed to gauge impacts on households and governmental entities.

It is difficult to estimate the impact of cost increases on tipping fees at MWC's. This is because these fees, which are payments to MWC's for permission to dump MSW at the MWC, are set by local governments and may include subsidies. However, if it is assumed that all increased costs are passed through to the tipping fee, then tipping fees for the various size plants would increase by the amounts shown in Tables 7 and 8. Under the least stringent alternative (Regulatory Alternative I), tipping fees for the various MWC plants would increase by less than \$1 to \$13/Mg (less than \$1 to \$12/ton) of MSW combusted, and under the most stringent alternative (Regulatory Alternative IV), tipping fees would increase by \$8 to \$47/Mg (\$7 to \$43/ton) of MSW combusted. For

comparison, the average MWC tipping fee is currently about \$44/Mg (\$40/ton) MSW, although tipping fees charged at individual sites can range from negligible to over \$100/Mg MSW.

Preliminary results of an analysis of how an NSPS might affect the selection of technology by the industry, including whether some municipalities might scrap their planned incinerators in favor of landfilling, indicate that the regulatory alternative selected would have very little effect on the mix of MWC types that will be used over the next 5 years. However, even taking into account potential costs of controlling air emissions from landfills and meeting RCRA Subtitle D regulations, there may be a slight reduction in the growth rate for MWC's, with the MSW that would have been combusted being landfilled instead.

**Partial Benefits Analysis:** Table 11 presents partial total and incremental national benefits, benefit to cost ratios, and an implicit valuation of acid gas control under each of the five regulatory alternatives. The benefits shown are for emission reductions of PM. Benefits are calculated based primarily on reduced mortality, morbidity, and property deterioration. The benefits of PM emissions reduction are valued at \$16,000/Mg (\$14,000/ton). This figure is significantly greater than previous Agency estimates for PM. The EPA requests comment on the methodology and data used to derive these estimates.

TABLE 11.—PARTIAL NATIONAL BENEFITS OF THE REGULATORY ALTERNATIVES FOR MWC EMISSIONS

Regulatory alternative	Partial benefits for pm control (\$10 <sup>6</sup> /yr)		Annualized Costs (\$10 <sup>6</sup> /yr)		Overall B/C ratio	Incremental B/C ratio	Value of MWC acid gas control resulting in incremental B/C=1.0 (\$/Mg)
	Total	Incremental	Total	Incremental			
I.....	88	88	6	6	14.6	14.6	0
IIA.....	88	0	96	90	0.9	(NA)	1,600
IIB.....	88	11	114	16	0.9	0.6	1,500
III.....	88	0	145	31	0.6	(NA)	1,900
IV.....	89	11	163	18	0.6	0.6	1,800

Under Regulatory Alternative I, the incremental benefit to cost ratio is greater than 1, and incremental net benefits are realized. Under the remaining alternatives, acid gas control is applied. The MWC acid gas (SO<sub>2</sub> and HCl) emissions would have to be valued at \$1,900/Mg (\$1,700/ton) or more for the incremental benefit/cost ratio for Regulatory Alternatives IIA through IV to be greater than 1. Although previous NSPS have required control of SO<sub>2</sub> at

costs of as much as \$3,300/Mg (\$3,000/ton) of SO<sub>2</sub> emission reduction, generally average cost-effectiveness levels have been less than \$1,000/ton.

While EPA benefit estimates for SO<sub>2</sub> emissions reduction are generally about \$1,250/ton, HCl emission reduction benefits have not been quantified. Emissions reductions of HCl are greater than for other pollutants, and modeling indicates that some plants have ambient HCl concentrations that exceed the HCl

welfare effects level of 3 µg/dscm (1.3 gr/million dscf) (annual average) at baseline. Regulatory Alternatives IIA, IIB, III, and IV would reduce HCl emissions by about 75 to 95 percent, and would reduce ambient concentrations to below the welfare effects level for all model plants. Despite these potential benefits, no monetary evaluation of HCl emissions is possible at this time. A dose-response function relating health and welfare effects to reduced



emissions of HCl is not currently available. Thus, potential benefits associated with these alternatives in terms of reduced HCl emissions are not considered by the benefits analysis.

There are also other benefits not included in the analysis. Health effects benefits for dioxins/furans control were not included. Health effects benefits from reduced exposure to metals were not included, but have been at least partially counted via the PM benefits analysis. In addition, benefits from reduced landfilling and reduced emissions of acid gases contributing to acid rain have not been included in the analysis. The benefits analysis does not take into consideration the reductions of MWC organics, MWC metals, MWC acid gases, and  $\text{NO}_x$  resulting from materials separation and  $\text{NO}_x$  control requirements nor the nonair quality environmental benefits achieved by materials separation; however, these benefits are discussed in Sections V and VI.

The EPA requests comment on all parts of the benefits analysis. The EPA is especially interested in comments regarding the benefit estimates for PM and  $\text{SO}_2$ , the appropriate benefits for HCl and dioxin/furan control, and other benefit(s) not included in this analysis.

**Regulatory Alternative Selected:** Regulatory Alternative IV was selected for control of MWC emissions from new MWC's based on the determination that: (1) the combination of GCP and SD/FF control is the best demonstrated technology for MWC emissions for large plants (> 225 Mg/day (250 tons/day) capacity) and (2) GCP and DSI/FF or

DSI/ESP is the best demonstrated technology for small plants (< 225 Mg/day (< 250 tons/day) MSW capacity). While the emission limits are based on performance of these technologies, the owner or operator of an MWC could use other technologies to comply with the emission standards.

The control technologies identified as best demonstrated technology have been demonstrated at several MWC plants. Manufacturers are currently designing MWC's to include GCP. There are over 15 MWC plants in the U.S. (which contain over 30 individual MWC's) with SD/FF that are either operating, under construction, or have been permitted. Since issuance of the PSD and NSR permitting operational guidance in June 1987, permits for new large MWC's have required SD/FF control. The best demonstrated technology for smaller MWC's DSI/FF and DSI/ESP systems, have been demonstrated in tests at five MWC plants in the U.S. Similar systems have also been used in Europe and Japan. As described previously, no adverse cost or economic impacts were identified for Regulatory Alternative IV. Impacts on households and government units were determined not to be severe, and the regulations are not expected to significantly affect the proportion of MSW that is combusted versus landfilled.

Although additional reductions of MWC emissions would be achieved by applying the most stringent controls to all MWC's, regardless of size, the reductions attributable to small plant emissions would be relatively small, and

the cost impacts would be unreasonably high. Application of acid gas controls based on SD/FF to small MWC's would achieve an additional 2 percent reduction in national acid gas emissions relative to use of acid gas controls based on DSI/ESP or DSI/FF. Disposal costs (compared to baseline) for small MWC plants would increase as much as about \$80/Mg (\$72/ton) of MSW compared to less than \$12/Mg (\$11/ton) of MSW for most large MWC's. The cost effectiveness of best acid gas control would be about \$4,600/Mg (\$4,200/ton) of acid gas removed for a typical small MWC plant, compared to a cost effectiveness of about \$1,500/Mg (\$1,400/ton) of acid gas removed for a typical large MWC. Considering the cost impacts and relatively small potential emissions reduction, EPA believes that control of acid gas emissions from small MWC's with best acid gas control would be unreasonable, and that application of good acid gas control technology is the best demonstrated technology.

The EPA further believes that the 225 Mg/day (250 tons/day) capacity is a reasonable dividing line between small and large MWC's. As can be seen in Figure 1, at capacities below this point annual disposal costs begin to increase sharply. In addition, the existing NSPS (Subpart Db) for this industry and operating guidelines for NSR permits use the same dividing line for large and small facilities, so that the action proposed today is consistent with the existing regulatory framework.

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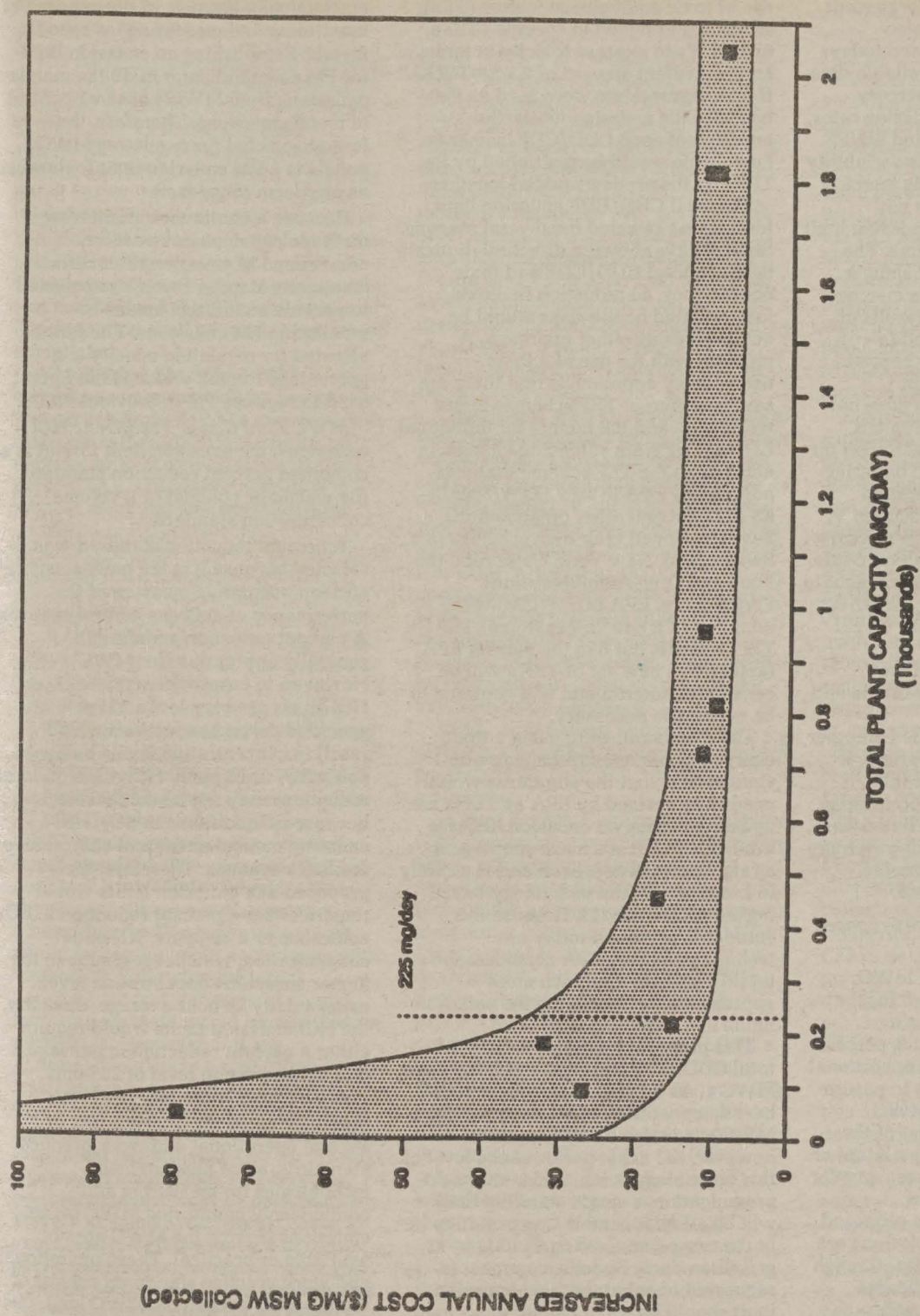


Figure 1. Increased annual cost of SD/FF control v. MNC plant size for new MNC's.

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A mercury emission limit or percent reduction requirement was also considered, but is not proposed today. As previously explained, available data indicate wide variation in mercury collection efficiency and emission rates, even for MWC's with GCP and SD/FF controls. The reasons for this variability and the mechanisms affecting mercury emissions and collection are not understood. Therefore, an emission limit cannot be specified at this time. The EPA and industry are establishing a joint task force to investigate mercury emissions and control. The results of this investigation will be used to determine what action is appropriate with regard to mercury issues.

Although today's proposal does not include a mercury emission limit, it does, however, include a prohibition on the combustion of household batteries as part of the materials separation provisions. As discussed in Section V, household batteries (including mercury oxide, alkaline manganese, silver oxide, and zinc carbon batteries) are thought to be a major source of mercury in MSW, and removal of these batteries would reduce mercury emissions.

At promulgation, based on the information that becomes available and the results of the task force investigation, it will be decided whether a mercury standard is appropriate. It will also be decided whether it is appropriate to maintain the prohibition on combustion of household batteries (possibly in combination with a mercury emission standard) or whether the prohibition should be removed.

#### *G. Selection of Format for the Proposed Standards*

For purposes of regulating MWC emissions, the format selected for the proposed standards would be a combination of emission limits, percent reduction requirements, and operational and work practice standards to ensure control of each subclass of MWC emissions. The specific format of the standard proposed for each pollutant or operational practice and the reasons for selection are discussed below.

**MWC Organics:** Under the proposed standards, MWC organic emissions are measured in units of total tetra- through octa-chlorinated dibenzo-p-dioxins (CDD) and chlorinated dibenzofurans (CDF). To arrive at the total CDD/CDF emission level, the emissions of each tetra- through octa-CDD and CDF homologue are added together. This calculation results in total CDD/CDF emissions in units of ng/Nm<sup>3</sup>.

Another way of reporting CDD/CDF emissions is in units of toxic equivalents. This approach involves the

use of toxic equivalence factors (TEF), which are assigned to specific CDD's and CDF's to express toxicity in terms of an "equivalent amount of 2,3,7,8-TCDD." If toxic equivalents were used as the basis for the emission limits, the emission of each CDD/CDF isomer or homologue would be multiplied by its TEF and the products added together.

The total CDD/CDF emission limit format was selected for several reasons. Studies have shown a direct relationship between total CDD/CDF and toxic equivalency, so reduction in dioxin/furan-related health risks would be achieved using either approach. A problem with the use of a toxic equivalency approach is that there are several different TEF schemes in use worldwide and the factors for individual CDD's/CDF's are subject to change. In addition to the TEF scheme that was adopted by EPA in 1987 (EPA/5625/3-87-012), several other organizations have developed their own schemes (e.g., Switzerland, New York, California, the Food and Drug Administration). Furthermore, EPA is considering the adoption of a new International TEF (I-TEF) scheme, but like the current EPA factors, this new set of TEF's will be considered interim and will continue to be revised as necessary.

The disadvantage to using a toxic equivalent scheme for the emission standards is that the standards would need to be revised by EPA as TEF's are updated. Setting an emission limit for total CDD/CDF is a more simple and straightforward approach and is entirely in keeping with the technology-based regime of Section 111. Because the standards proposed today are technology-based, EPA considers the total CDD/CDF approach more appropriate for specifying the emission limits in these standards.

This proposal identifies a range of total CDD/CDF emission limits for large MWC's. As explained previously, the best demonstrated technology for large MWC's includes a SD/FF system; however, the exact performance level of this technology is still under study. At promulgation, a single emission limit will be adopted, and it is expected to be in the range of 5 to 30 ng/Nm<sup>3</sup> (2 to 12 gr/billion dscf). Specific comment is requested on what the final emission limit should be.

**MWC Metals:** Establishing emission limits for each of the numerous metals emitted from MWC's was considered but was not adopted as a reasonable format for regulating MWC metals because the types and amounts of metals emitted from an MWC are highly variable and site-specific. In addition, this method might not be practical

economically because of the expense of monitoring and measuring for specific metals. Establishing an emission limit for PM as an indicator of all the metals emissions from MWC's ensures control of metal emissions. Therefore, the format selected for regulating MWC metals is a PM emission limit (expressed as mg/dscm or gr/dscf).

Because a continuous monitoring methodology does not exist for measuring PM emission rates directly, an opacity standard was also selected to provide an indirect means of monitoring PM emissions. The format selected for regulating opacity is a percentage format, which is the format used to regulate PM in previous NSPS.

**MWC Acid Gases:** For SO<sub>2</sub> or HCl emissions, the emission limit format is a combined percent reduction standard (by weight or volume) or a volume concentration standard.

A percent reduction standard was selected because it is the most accurate and representative measure of the performance of acid gas control systems. A percent reduction standard is generally appropriate for MWC's. However, in cases where inlet SO<sub>2</sub> or HCl levels are very low and the specified percent reductions would result in concentration levels below 30 ppmv SO<sub>2</sub> or 25 ppmv HCl, these percent reductions may not be achievable because of limitations in SO<sub>2</sub>/HCl emission measurement and control loop feedback systems. Therefore, the proposed SO<sub>2</sub> emission limits would require either a percent reduction in SO<sub>2</sub> emissions or a 30 ppmv SO<sub>2</sub> outlet concentration, whichever results in the higher emission concentration level, using a daily 24-hour average. Similarly, the HCl emission limits would require either a percent reduction in emissions or a concentration level of 25 ppmv.

**Good Combustion Practices:** The format selected for GCP is a mix of several operational and work practice standards, since measurement technologies for measuring and continuously monitoring MWC organic emissions leaving the MWC are not available or practical. These operational and work practice standards consist of limits on CO emissions, MWC load, flue gas temperature at the inlet to the PM control device, and operator certification and training requirements. Each of these items can be related to the level of MWC organic emissions in the gases leaving the MWC, and compliance with the requirements associated with each of these items can easily be monitored.



#### H. Performance Test Methods and Monitoring Requirements

The performance testing and emission monitoring requirements included in the proposed regulation would apply to all MWC's subject to the proposed standards for MWC organics, MWC metals, and MWC acid gases, except as noted below. As stated in the NSPS General Provisions (40 CFR 60.8) initial compliance tests must, unless otherwise specified in the regulation, consist of three separate runs using the applicable test method, and the arithmetic mean of the three runs shall be used to determine compliance.

All emission limits for MWC emissions are corrected to 7 percent  $O_2$  (dry basis). Some MWC's may have  $CO_2$  monitors rather than  $O_2$  monitors, or may prefer to correct to an equivalent percent  $CO_2$ . Owners or operators may request an equivalent emission limit corrected to  $CO_2$  rather than  $O_2$ . Generally, a correction to 7 percent  $O_2$  is equivalent to a correction to 11 or 12 percent  $CO_2$ . However, there is not an exact conversion that is universally applicable because of variations in the carbon content of MSW. The owner or operator making the request must establish the relationship between  $O_2$  and  $CO_2$  for an individual MWC during compliance testing.

**MWC Organic Emissions:** An initial performance test would be required for all MWC's subject to the proposed MWC organic emission (i.e., dioxin/furan) standard. The emission limit pertains to total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans. The performance test would be conducted in accordance with Method 23. Following the initial performance test, subsequent annual performance tests would be required for all MWC's. However, if three performance tests in a row (three annual tests) indicate compliance with the MWC organic emissions limit, MWC's located at small MWC plants may skip the annual performance test for the next 2 years. At a minimum, an MWC performance test must be performed for MWC's at small MWC plants every 3 years. Those MWC's located at large MWC plants must be tested every year.

**MWC Metals:** An initial performance test would be required for all MWC's subject to the proposed MWC metals (i.e., PM) emission limit. The performance test would be conducted in accordance with Method 5. Method 1 would be used for determining the number and location of sampling points. Method 3 would be used for flue gas analysis. All performance tests would consist of a minimum of three runs using

Method 5 conducted under representative operating conditions (i.e., at full load). The average PM emission rate of the three runs would be used to determine compliance. Following the initial performance test, a subsequent annual performance test would be required for all MWC's. However, if three performance tests in a row indicate compliance with the PM limit, MWC's located at small MWC plants may skip the annual performance test for the next 2 years. At a minimum, an MWC performance test must be performed for MWC's at small MWC plants every 3 years. Those MWC's located at large MWC plants must be tested every year.

Compliance with the opacity standard would be determined using Method 9 for visible emissions. As stated in section 60.11, for the purpose of determining initial compliance, the minimum total time observations would be 3 hours (30 6-minute averages). A transmissometer would be installed to monitor continuously the opacity and to alert MWC owners and operators of any occurrences of excess emissions requiring corrective action. Data would be recorded and reduced to 6-minute averages using Method 9.

**MWC Acid Gases:** The proposed regulation for MWC acid gases includes provisions for both  $SO_2$  and HCl emissions.

**Sulfur Dioxide.** Continuous monitoring of  $SO_2$  emissions would be performed by MWC's to demonstrate continuous compliance with the standards. Installation and operation of continuous emission monitoring systems (CEMS) at the inlet and outlet of the  $SO_2$  control device would be required for MWC's demonstrating compliance with the percent reduction or outlet concentration standard. Those MWC's that elect to demonstrate continuous compliance solely with the 30 ppmv  $SO_2$  emission limit may install and operate CEMS only at the outlet of the control device. Data collected by the CEMS would be used to determine compliance with the  $SO_2$  percent reduction requirements and emission limits.

Compliance with the  $SO_2$  percent reduction requirements and emission limits would be determined using a 24-hour daily (block) average based on CEMS. All valid data in each 24-hour period must be used to determine compliance. The first daily 24-hour average percent reduction and emission values calculated after initial startup would serve as the initial performance test required under § 60.8.

**Hydrogen chloride.** An initial performance test would be required for

all MWC's subject to the proposed HCl emission standard. Compliance with the HCl percent reduction requirements and emission limits would be conducted in accordance with Method 26. Following the initial performance test, subsequent annual performance tests would be required for all MWC's. However, if three performance tests (three annual tests) in a row indicate compliance with the HCl limit, MWC's located at small MWC plants may skip the annual performance test for the next 2 years. At a minimum, an MWC performance test must be performed for MWC's at small MWC plants every 3 years. Those MWC's located at large MWC plants must be tested every year.

**Requirements for CEMS:** When establishing standards that require the use of CEMS for determining compliance, it is necessary to consider that monitors undergo periods of downtime and, thus, are not available 100 percent of the time. Well-maintained CEMS have little downtime. However, minimum data requirements would be established that limit the amount of data permitted to be lost before use of an alternative monitoring method is required. These minimum data requirements would provide the owner or operator with time to maintain and calibrate the CEMS, correct minor malfunctions, and, if necessary, arrange for an alternative monitoring method. The minimum data requirements also would prevent the possibility of an affected facility operating for unreasonably long periods without collecting emission data.

Overall, the standards would require CEMS data to be collected during 75 percent of the MWC operating hours per day for 75 percent of the operating days per month. These requirements apply to all CEMS needed to determine compliance with the standards ( $SO_2$ , opacity, CO,  $O_2$ , or  $CO_2$ ). Collection of this amount of data has been determined to be achievable using a well-operated and properly maintained CEMS. However, this requirement is separate from the compliance test requirements where all valid data would be used to determine compliance even where more than 75 percent of the data is available (e.g., no valid data may be deleted from the calculations to determine compliance). From an enforcement point of view, not operating CEMS is equivalent to not conducting a required performance test.

In order to ensure that CEMS provide accurate data, daily calibration drift checks and quarterly accuracy audits would be required to be performed on each CEMS. These quality assurance



checks would be performed in accordance with 40 CFR part 60, Appendix F, Procedure 1, "Quality Assurance Requirements for Gas Continuous Emission Monitoring Systems Used for Compliance Determination." Appendix F, Procedure 1 applies to all CEMS used for continuous compliance determination under 40 CFR part 60, Subpart Ea.

**Combustor Operating Practice Standards:** As part of GCP, to minimize reduction in MWC organic emissions from the combustor, CO emission limits and specifications for MWC load level and flue gas temperature at the PM control device inlet are proposed.

**Carbon Monoxide.** The CO emission limits are specified for each common type of MWC. Each MWC would be required to install a CEMS at the combustor outlet to monitor continuous compliance with the applicable CO emission limit. Compliance would be determined using 4-hour block averages. All valid data would be used to compute each average.

**Operating Load.** An operating load limit of 100 percent of full demonstrated load is specified for all MWC's. The full load level would be defined during the initial compliance test, but could be raised if an MWC owner or operator can demonstrate during a compliance or subsequent performance test that all other applicable standards for MWC organics, MWC metals, MWC acid gases, and the CO emission limit can be met while operating at a higher load.

All MWC's subject to load limits would be required to install monitors to continuously measure steam flow, and compliance would be determined by calculating 1-hour averages. This requirement would not apply to MWC's that did not generate steam.

**Temperature.** Temperature would be continuously monitored at the inlet to the PM control device to determine compliance with the 230 °C (450 °F) temperature limit. A block 4-hour average would be used to determine compliance.

**Operator Certification and Training.** Operator certification and site-specific training of MWC operating personnel would also be required by the proposed standards. There are no test methods pertinent to operator training, but all MWC plants would have to keep records of certification and training as described in Section IV.I.

#### 1. Reporting and Recordkeeping Requirements

The proposed standards would require owners and operators of all affected facilities to submit notifications of construction or reconstruction, date of

anticipated startup, date of actual startup, and anticipated date of demonstration of the CEMS (if applicable), as required under the General Provisions (40 CFR 60.7).

After the initial performance test has been completed, the proposed regulation would require the submission of quarterly compliance reports for SO<sub>2</sub> and the combustor operating parameters that are continuously measured (CO, load level, and flue gas temperature) for all MWC's. Quarterly excess emission reports for opacity must also be submitted for all MWC's. The proposed standards would also require that annual compliance reports for dioxins/furans, PM, and HCl be submitted for all MWC's. However, if three performance tests in a row indicate compliance with the dioxin/furan, PM, or HCl emission limits, MWC's located at small MWC plants would be exempt from the next two annual tests of that pollutant, and simplified annual reports may be submitted for the next 2 years. Full annual reports must be submitted every year for MWC's located at large MWC plants. These reports would include, as applicable for the period covered by the report: (1) Any period where emissions exceeded the standards, or where values of monitored operating parameters were in violation of the standards; (2) results of all annual performance tests; (3) all 24-hour average SO<sub>2</sub> emission rates and percent reduction values, 4-hour average CO emission rates and temperatures, and 1-hour average load levels calculated during the reporting period; and (4) identification of any periods for which data were excluded from these calculations. In addition, each quarterly report would include the results of the daily CEMS drift tests and quarterly accuracy determinations as required under Appendix F, Procedure 1.

If the minimum amount of data were not obtained for a 24-hour average period, reasons for failure to obtain sufficient data (e.g., CEMS malfunction), and a description of corrective action taken would also be included, along with all information needed to calculate the 24-hour average values according to Method 19. Also, if the minimum amount of data (75 percent of the operating hours per day and 75 percent of operating days per month) were not obtained, this must be included in the quarterly reports and reasons specified.

The proposed regulation would also require that certain types of records be maintained. Records to be maintained include all data outputs of the CEMS; all quarterly and annual reports submitted under this rulemaking; and all records required under Appendix F, Procedure 1.

The required operating manual must be updated annually and be readily accessible. Records of operator certification and training of MWC operating personnel are required. All required records would be maintained for 2 years following the date of such records, after which they could be discarded.

The reporting and recordkeeping requirements in the proposed regulation are necessary to inform enforcement personnel of the compliance status of new MWC's that initiate operation. In addition, they would provide the data and information necessary to ensure continued compliance of these MWC's with the proposed regulation. At the same time, these requirements would not impose an unreasonable burden on MWC owners or operators.

#### J. Malfunction Provision

The MWC standards being proposed today apply at all times, except during periods of startup, shutdown, and malfunction. A special provision is being added to these proposed standards which places a limit of 3 hours per occurrence on the time that a plant can claim an exemption from standards due to startup, shutdown, or malfunction. This provision does not change the definitions of startup, shutdown, and malfunction in the General Provisions nor does it change any of the requirements in the General Provisions. Malfunction is defined as "any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions" (40 CFR 60.2). As specified in 40 CFR 60.7, records must be maintained of the occurrence and duration of any startup, shutdown, or malfunction, any emission levels occurring during such times, the nature and cause of any malfunction, and corrective action taken or preventive measures adopted. These records must support a determination, on a case-by-case basis, that a period of emissions above the allowable limit should be considered as startup, shutdown, or malfunction. The compliance provisions in 40 CFR 60.8 also specify that "at all times, including periods of startup, shutdown, and malfunction," owners or operators shall operate and maintain the affected facility and air pollution controls to minimize emissions.



Most MWC's are base-loaded and operate either continuously or on a Monday through Friday schedule, so the time spent to start-up and shut-down these MWC's is minimal, with only one startup and shutdown period required per week. Furthermore, the proposed MWC standards apply only while MSW is being combusted. Since most MWC's fire fuel oil or natural gas during warm-up and then switch to firing MSW once the MWC is at operating temperature, the proposed MWC standards usually would not apply during MWC warm-up, but would become applicable as soon as MSW is introduced into the MWC. Similarly, shutdowns would not take more than 3 hours while MSW is being fired.

Due to the configuration of SD/FF systems, maintenance can be performed on line to repair most malfunctions. In some cases, such as replacing a rotary atomizer or spray nozzle, the load must be reduced while maintenance is being

performed, but the time spent operating at reduced load would be short. If any malfunction would take more than 3 hours to repair, the MWC could shut down to complete the repair.

#### V. Rationale for Standards for Materials Separation

##### A. Background

Currently, the U.S. generates about 150 million Mg (160 million tons) of municipal solid waste (MSW) per year, and under current waste management practices, this amount is expected to grow steadily through the year 2000. Much of the waste stream is attributed to disposable products that are used for a short time and thrown away. These products include "convenience" packaging suited to a fast-paced lifestyle, such as fast food containers and microwavable food packaging. Figure 2 shows the percent contribution (on a mass basis) of each of the major

classes of waste materials to the total MSW stream. As shown in Figure 2, more than 40 percent of the solid waste stream consists of paper and paper products discarded in houses, offices, and factories. Yard waste makes up another 18 percent of the total. The other major components are metals (8.7 percent), glass (8.2 percent), plastics (6.5 percent), and food wastes (7.9 percent). At present, about 80 percent of the total MSW is landfilled, about 10 percent is combusted in municipal waste combustors (MWC's), and about 10 percent is recycled. The "Agenda for Action" indicates that by 1992, 25 percent of the MSW stream should be diverted by source reduction and recycling. Also, the percent landfilled should decrease from 80 percent to 55 percent, and the amount of MSW combusted in MWC's should increase from 10 percent to 20 percent.

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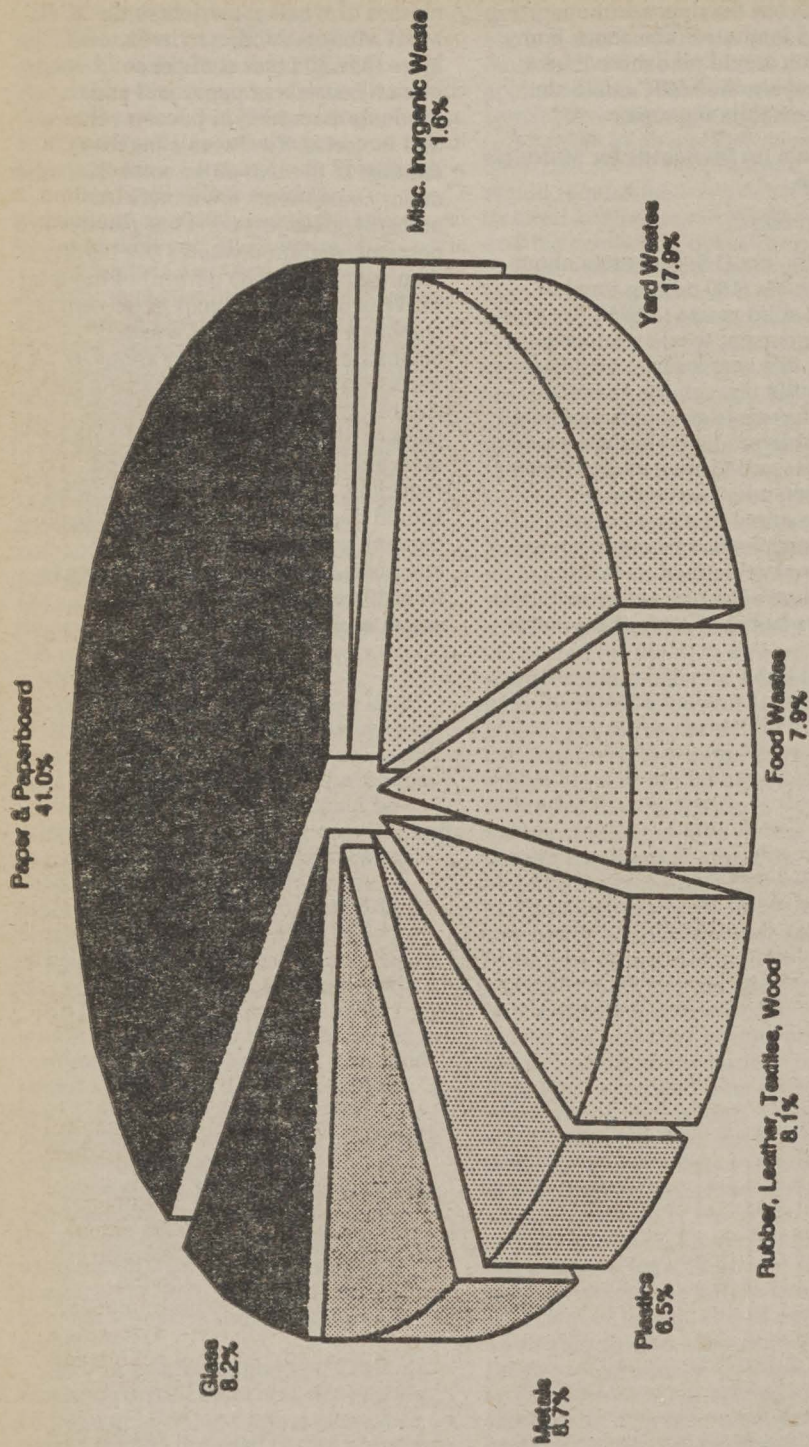


Figure 2. Gross discharges, by weight, of MSW materials.

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### *B. Selection of Regulatory Alternative for Materials Separation Selection of Alternative*

As discussed in this proposal, materials separation refers to the separation and removal of certain components from MSW prior to combustion in an MWC. In many cases, materials separated from MSW can be recycled, thereby preserving natural resources. Recycling these materials would also reduce the amount of waste combusted or landfilled, and could provide funds (\$) to offset separation costs. By reducing the amount of waste to be combusted, overall MWC emissions can be reduced. In addition, emissions of specific constituents of MWC emissions can be reduced by separating certain classes of waste materials. Materials separation technology is applicable to all types of MWC technology including, but not limited to, mass burn MWC's, refuse derived fuel-fired (RDF) MWC's, and modular MWC's.

The proposed standards would require all new MWC's to process the MSW prior to combustion to achieve an overall 25 percent or greater reduction (annual average, by weight) of MSW through separation for recovery of one or more of the following materials: paper and paper-board combined; ferrous metals (including white goods); nonferrous metals; glass; plastics; household batteries; and yard wastes. In calculating the 25 percent weight reduction, a maximum credit of up to 10 percent would be allowed for yard waste separation. The remainder of the 25 percent would come from the other listed materials.

The proposed standards would prohibit the combustion of large lead-acid vehicle batteries (wet lead-acid batteries weighing more than 5 kg [11 lbs] that are manufactured for use in motor vehicles, vessels, or aircraft, or any other use). A program to remove household batteries prior to combustion would also be required.

Separation of the materials discussed above may be achieved by mechanical or manual separation at the MWC site, by off-site mechanical or manual separation, or by community source reduction or materials separation (recycling) programs, or a combination thereof.

Processing of MSW to remove these types of materials prior to combustion yields benefits in terms of reduced emissions potential for all components of MWC emissions including: MWC organics, MWC metals (including mercury), and MWC acid gases. Emissions of nitrogen oxide (NO<sub>x</sub>)

would also be reduced. In addition, MWC steam generation efficiency and MWC operating availability have been shown to increase at MWC's that are practicing materials separation.

In addition to the expected emissions reduction achieved by materials separation, additional nonair quality environmental benefits are also expected, including improved MWC ash quality and reductions in pollution and energy requirements associated with extracting and processing virgin materials. The reduced emissions also will contribute to a reduction in global warming.

The Agency considers recovery of materials from the MSW stream to be consistent with the goals and principles of its policy on pollution prevention (54 FR 3845). In particular, the proposed materials separation provisions would encourage pollution prevention through source reduction and recycling. Community separation would be used in many areas to comply with these provisions, resulting in increased public participation in the pollution prevention program. Furthermore, involving the public in materials separation and recycling programs may result in increased environmental awareness and development of an environmental ethic by the general public. This would have long-range environmental benefits.

The overall 25 percent weight reduction level is consistent with the goals of the "Agenda for Action," the Agency's overall strategy for dealing with MSW. The "Agenda for Action" goals include reducing the Nation's total MSW stream by 25 percent through source reduction and recycling by 1992. The overall percent reduction format included in the proposal will allow MWC's flexibility to tailor their program to fit regional markets for recovered materials and seasonal variations in MSW composition.

**Selection of Implementation Schedule:** The materials separation requirements would be effective (i.e., a materials separation program must be initiated or implemented) upon start up for MWC's that commence construction after promulgation of this new source performance standard (NSPS). However, owners or operators of MWC's that commence construction after today's date, but on or before the date of promulgation would be required to implement the materials separation program by December 31, 1992, or at start up, whichever is later. This is the same date by which existing MWC's must initiate materials separation programs under the guidelines proposed in today's Federal Register notice. It is also consistent with the Agenda for

Action, which called for achieving 25 percent MSW reduction by 1992.

Those MWC's that commence construction between proposal and promulgation of the NSPS, however, are in a situation similar to existing MWC's with regard to materials separation. They will already be under construction or operating when the NSPS is finalized, and additional time will be required to design and implement a separation program. This may include design, purchase, and installation of on-site separation equipment, and/or negotiations and development of contracts with third parties to implement off-site or community separation programs. Putting a program in place to achieve the separation requirements is a relatively complex process which could take up to 2 years, and the December 31, 1992, date provides this amount of time to design and implement a materials separation program. The EPA believes that this is a reasonable means of subcategorizing these sources pursuant to the authority of Section 111(b)(2).

The initial demonstration of compliance with the materials separation provisions is required at the end of the second calendar year following implementation of materials separation. This would be the end of the second full calendar year after start-up for MWC's that commence construction after promulgation. For MWC's that commence construction between proposal and promulgation, compliance demonstration would be required at the end of calendar year 1994 or two calendar years after start-up of the MWC, whichever is later.

Whenever any new process or control system is first started, it frequently does not perform exactly as expected. Despite careful design and planning, time is often needed to observe actual performance and make the necessary adjustments or refinements to the system to achieve design performance. This is true whether the new system is a piece of air pollution control equipment or a community materials separation program.

The General Provisions in 40 CFR 60.8 recognize this fact by allowing up to 180 days after start up of an affected facility for conducting the initial performance test. This allows time to test and adjust the air pollution control hardware and its operation before conducting a stack test that is submitted to the enforcement agency to demonstrate compliance.

Similarly, time is likely to be needed to see how well a specific materials separation program is performing and make changes in the program, if



necessary, to comply with the materials separation provisions. Whether the program involves on-site or off-site mechanical or manual processing facilities, curbside materials separation programs, or some combination, it is difficult to predict in advance the actual percent separation that a specific program will initially achieve. The owners or operators of MWC's may very well need time to measure the actual performance of the new systems or programs, determine how they can best be operated, and make various changes or adjustments to the program before initial compliance is demonstrated.

Because of seasonal variation in the content of MSW, the requirement for 25 percent weight reduction of MSW through separation is based on an annual average. Therefore, MWC owners and operators will not know the percent separation their new system or program is achieving on an annual average basis until the end of the first year of operation; a few months of operation may not be descriptive of annual performance. In order to allow them time to adjust or fine-tune their materials separation program to ensure compliance, the materials separation provisions provide the time necessary to determine the performance of the materials separation program on an annual average basis before compliance must be demonstrated. Compliance demonstration is, therefore, required at the end of the second calendar year of operation of the materials separation program.

#### C. Rationale for Materials Separation Requirements

Recovery of each of the targeted categories of materials from the waste stream prior to combustion is expected to yield specific air emissions, energy, and collateral benefits. The Agency expects that separation of the specified categories of material would yield the following benefits:

**Paper and paperboard:** Reductions in MWC metal emissions would result from reduced combustion of paper impregnated with lead-based inks and mercury-based fungicides. Also reduction in carbon dioxide ( $\text{CO}_2$ ) concentration would result due to the decreased mass of paper combusted and the increased amount of forest due to reduced timber demand for virgin paper production. A reduction in MWC acid gas emissions would result from reduced combustion of paper impregnated with chlorine-based bleach (i.e., hydrogen chloride [ $\text{HCl}$ ]) and reduced combustion of sulfur-laden paperboard (i.e., sulfur dioxide [ $\text{SO}_2$ ]). Paper separation can result in an overall downsizing of

MWC's enabled by a reduction in the total combustible fraction of MSW. Indirect reduction in  $\text{CO}_2$  and other emissions would also result from reduced energy consumption resulting from increased paper and paperboard recycling and the corresponding reduction in virgin paper and paperboard production.

**Ferrous metals:** Reductions in MWC metal emissions (especially lead) would result from separation of ferrous materials assembled with lead solder or plated with lead, zinc, or cadmium. Emissions from coke oven batteries would be reduced based on increased use of recycled steel, thereby reducing benzene-soluble organic emissions. Also indirect reduction in emissions associated with energy consumption would result from increased ferrous metal recycling and the corresponding reduction in virgin steel production.

**Nonferrous metals:** Since nonferrous metals (aluminum cans in particular) are readily recyclable, not only would MWC emissions be reduced through separation, but reductions in energy consumption would also result from increased aluminum recycling and the corresponding reduction in primary aluminum smelting. Also, reductions in the amount of litter along roadsides and in public places could result.

**Glass:** Reductions in MWC metal emissions (especially lead) would result from separating glass materials containing lead (such as television picture tubes). Also, indirect reductions in emissions associated with energy consumption would result from increased glass recycling and the reduction of virgin materials in glass production.

**Plastics:** Reductions in MWC metal emissions (especially cadmium and lead) would result from reduced combustion of plastics, which contain such metals as stabilizers and/or in pigments. Potential reductions in emissions of acid gases and chlorinated MWC organics could result from decreased combustion of polyvinyl chloride plastics. An overall reduction in MWC emissions would result from downsizing MWC's enabled by a reduction in the total combustible fraction of MSW. Also, a reduction in  $\text{CO}_2$  emissions and energy consumption would result from increased plastics recycling and the corresponding reduction in virgin plastics production.

**Household batteries:** Reductions in mercury emissions and other MWC metal emissions (including cadmium and nickel) would result from separating household batteries prior to combustion. Add-on control systems typically

achieve a lower percent removal of mercury than other metals. As described in Section IV, mercury emission data are highly variable and the mechanisms of mercury emissions and control are not currently understood. A task force is being formed to investigate mercury emissions and controls. However, much of the mercury in MSW is contained in household batteries. Mercury oxide batteries are the type of battery with the highest mercury content, containing about 35 percent mercury, by weight. Common alkaline manganese batteries contain 7 percent mercury, and small silver oxide batteries contain about 1 percent mercury. The widely-used zinc carbon batteries may also contain small amounts of mercury. Therefore, in lieu of a mercury emission limit, it is proposed that a program be established to remove household batteries from MSW.

Although the Agency is proposing inclusion of a program to remove household batteries, it is recognized that very little information is available on the economic impacts or environmental benefits of such a program. The Agency solicits comments on whether the program should be required or not, what type of program should be required, what problems will be faced in implementing a program, and how effective a program would be in removing batteries and reducing mercury emissions. The Agency intends to include on the task force representatives from owners and operators of MWC's, State and local governments, and household battery manufacturers.

**Lead-acid vehicle batteries:** Removal of lead-acid vehicle batteries would result in a direct reduction in MWC metal emissions (especially lead). Also a reduction in MWC acid gas emissions (especially sulfuric acid), and reduction in MWC emissions associated with combustion of plastic lead-acid battery casings would be achieved. Indirect reductions in emissions will also result from the reduced demand for lead from primary lead smelters.

**Yard waste:** Reductions in  $\text{NO}_x$  emissions and increased combustion stability would result from a decrease in the nitrogen content and moisture of the MSW. Emissions of MWC organics would be reduced due to improved combustion stability since yard waste often has a high moisture content and exhibits inconsistent combustibility. Also, energy consumption would be reduced due to a decreased need for auxiliary fuel.

The overall 25 percent MSW reduction and vehicle battery and household battery removal can be



achieved by demonstrated technologies, including mechanical and/or manual methods or deposit/return programs for removal of each of the specified materials. The EPA's estimated costs of compliance assume that some manual separation at the MWC will be necessary.

Additional information supporting the above conclusions is contained in the docket.

The goal of the materials separation requirements is to encourage removal of multiple materials to achieve reductions in MWC emissions. The typical yard waste content of MSW is 18 percent (by weight), but some communities will have over 25 percent yard wastes. In calculating the 25 percent overall MSW reduction, a maximum credit of 10 percent would be given for yard waste separation to ensure that the goal of the materials separation requirements is met.

The EPA believes that materials separation, used in conjunction with good combustion practices, and add-on controls, will result in further reductions of emissions from MWC's. It is simply common sense, and the Agency's expectation, that reductions in the amount of pollution-generating materials combusted in an MWC will reduce the amount of pollutants in its air emissions. In addition, materials separation should improve the combustion efficiency of MWC's, and thus reduce MWC emissions, by removing noncombustibles like metals, glass, and water-saturated yard wastes from the feed stream to the unit. In fact, there are a number of studies (which are part of the record for this rulemaking) documenting significant reductions in MWC emissions as a result of application of materials separation technologies.

The Agency is, at this time, unable to reliably quantify the emission reductions attributable to materials separation when an MWC is equipped with highly efficient at-the-stack air pollution control devices. Not only are the limited existing test data insufficient to make this quantification, but other difficulties exist as well. First, the composition of waste received at MWC's varies depending on the types of waste generated in the service area and the season of the year. Therefore, the proportion of each separable material in the waste feed will vary among MWC's. Because of this variability, and economic factors, MWC's will choose different ways of accomplishing materials separation, and the percent reduction of specific materials will vary among MWC's. While MWC emissions as a whole will be reduced, it is difficult

to predict the specific reduction in each component of MWC emissions (e.g., MWC metals, MWC organics, and MWC acid gases). Further incremental reductions thus cannot be reliably measured. Second, because of the substantial removals achieved by air pollution control devices, the remaining pollution being measured is small, and it becomes increasingly difficult to measure and interpret reliably with available test methods. In some cases, normal variability in the amount of metals, organics, and acid gas precursors in the incoming feed could make it difficult to interpret emission reductions attributable to materials separation. That is, it will not be possible to determine which reduction is attributable to variable waste feed and which to materials separation.

The processing of MSW to remove specified types of materials prior to combustion will also produce benefits associated with reduced quantities of ash to be landfilled and reduced levels of toxic materials in the ash. The proposed requirement for an overall 25 percent MSW reduction and the prohibitions on the combustion of vehicle batteries and household batteries will yield an appreciable tonnage reduction in the quantities of MWC residues (both bottom ash and flyash) disposed of in landfills. It is expected that the 25 percent MSW reduction coupled with the prohibitions on batteries would result in an approximate reduction of 80 percent in ferrous and nonferrous metals, and glass. This would reduce the tonnage of ash requiring disposal by 30 percent. With respect to ash quality or toxicity, the entire range of air toxics in ash is of concern with regards to fugitive emissions associated with the handling, storage, and transportation of ash. The principal toxic components of ash with respect to groundwater contamination are lead and cadmium. The requirement for materials separation and related prohibitions will produce ashes characterized by substantially lower toxicity.

The Agency believes that the long-term viability of markets for recovered materials would be significantly enhanced by ensuring a stable supply of recovered materials. The Agency believes that a stable market supply would result from the proposed standards. Such stable supplies would tend to encourage long-term contracts with materials recovery firms and further the development of alternative end-uses. This same principle was recognized by the Congress in enacting the 1976 Resource Conservation and Recovery Act (RCRA) when it provided

that State solid waste management plans shall not preclude States of local governments from entering into long-term contracts for supplying solid waste to resource recovery facilities, operating such facilities, and securing long-term markets for recovered materials and energy [RCRA Section 4003(a)(5)]. See also H. Rep. No. 94-1491, 94th Cong. 2d Sess. 10 (1976) ("Resource recovery facilities cannot be built unless they are guaranteed a supply of discarded material"). The Agency is also aware that the economics of materials recovery is in many cases driven more by avoided landfill or MWC disposal cost than by potential revenues from sales of recovered materials.

#### *D. Materials Separation Methods*

Separation of materials from MSW is accomplished in two ways: household separation (including deposit/return programs) and centralized processing. Household separation is the separation of recyclable materials from the waste by the generator (i.e., household or business); it is presently the primary method of separation in the U.S. At the household level, separation is accomplished by placing waste items (e.g., glass, paper, aluminum, etc.) in segregated containers. These containers are either picked up at the curbside or taken to local recycling bins or buyback centers. Deposit/return systems are also used to encourage separation and recycling of beverage bottles and cans. The homeowner would return the items to the point of purchase. Household separation of yard waste can be accomplished either by backyard composting or by segregating it for separate curbside pick-up where it is transported to a community composting site. Separation of lead-acid vehicle batteries could be achieved by a deposit/return system where the batteries are returned to the battery recycler, battery retailer, service station, or other recycling center. The separation of household batteries could be achieved through a deposit/return system and/or a prohibition on household disposal of batteries with MSW and implementation of separate community collections for batteries. The success of community programs depends on many factors including the level of planning, community participation rate (which may vary depending on whether the program is voluntary or mandatory), and local market demand for separated materials.

An increasing amount of MSW separation is accomplished at centralized processing facilities which operate at MSW transfer stations,



landfills, or MWC's. At centralized processing facilities, recyclable items are removed from the waste stream by mechanical separation systems, manual handpicking, or a combination of both. A wide variety of automated processes may be used to separate the various components of MSW.

Ferrous metals are generally removed magnetically, except for white goods (appliances such as stoves, refrigerators, and air conditioners) which are visually identified and removed as waste is unloaded. Household batteries generally use ferrous metal (e.g., steel) casings and can be removed with the ferrous metal fraction. Nonferrous metals are separated by eddy current (electromagnetic) separation, electrostatic separation (which separates conductors such as metals and paper from nonconductors such as plastic and glass), or by a variety of wet and dry methods which separate metals according to density. Methods for glass removal include wet and dry density methods, pulverization/screening, and optical sorting (by automatic photocells). Mechanical systems currently processing MSW in the U.S. achieve about 80 to 90 percent ferrous metal recovery, 60 to 70 percent aluminum recovery, and 70 to 80 percent glass recovery. Some fractions of yard waste can be removed mechanically. For example, grass clippings and other heavy materials may be gravity separated after screening out larger items. However, the product is not pure, and may contain broken glass and other contaminants. Mechanical systems can separate some paper and plastics from the waste stream using air classification or electrostatic separation, but these systems normally do not separate the various types of paper and plastic into specific material types (e.g., paper grade or plastic resin type). In many cases, some manual sorting is performed along with mechanical separation to increase separation efficiency and to remove residual contaminants from the separated fractions.

Currently, there are no fully-automated mechanical systems for removing lead-acid vehicle batteries from MSW. At centralized processing facilities, a specialized metal detector, which selectively detects large lead objects, is available and can be used to identify and locate the batteries in the waste traveling on a conveyor belt, and then the battery can be manually removed.

#### *E. Legal Authority to Issue Materials Separation Standards for MWC's*

In this rule, the EPA's proposed determination of the "best technological

system of continuous emission reduction", which Section 111 standards of performance must reflect, includes determinations for the pre-combustion, combustion, and post-combustion stages of MWC operation. Best demonstrated technology for pre-combustion would include a requirement that new and existing MWC's remove noncombustible, toxic, recyclable, and compostable materials from their feed materials prior to combustion (referred to as "materials separation" in this preamble). The EPA believes that it possesses legal authority to require precombustion materials separation pursuant to Section 111. Such requirements are necessary to address the "nonair quality health and environmental impacts and energy requirements" that Congress requires the Agency to take into account in making a best demonstrated technology determination. Clean Air Act (CAA) section 111(a)(1)(C). The EPA construes this language as requiring it to consider not only the adverse impacts on other environmental media and energy use of Section 111 standards, but also that EPA may consider the nonair health and environmental benefits and energy benefits that can result. Consideration of nonair and energy impacts are an important part of determining what constitutes a "best" technology. (See H. Rep. No. 95-564, 95th Cong. 1st Sess. 128, 129 (Conf. Rep.); H. Rep. No. 95-294, 95th Cong. 1st Sess. 187.)

As noted above, EPA believes that there will be a reduction in MWC air emissions of toxic gases and other pollutants harmful to health as a result of materials separation. These reductions include not only criteria pollutants, but toxics such as lead, mercury, and cadmium. Moreover, as noted in detail in Section V.C. above, the Agency also expects the nonair health and environmental benefits from materials separation to be very great. Materials separation will improve MWC ash quality by removing noncombustibles from the unit's fuel stream, thus allowing better thermal destruction in the combustor and so keeping pollutants out of the combustion residues (ash). Materials separation should facilitate growth of markets for recycling by assuring adequate supplies of feed materials for recycling facilities. Recycling of separated materials will reduce the amount of waste ultimately disposed, saving critically scarce landfill capacity and reserving it for wastes for which land disposal is the best management alternative. Recycling of separated materials will also lessen the demand for raw materials, resulting in

overall conservation of resources, and other environmental benefits. For example, recycling of newsprint and other paper products reduces the demand for raw timber, which preserves existing forests, a consideration in combatting global warming. Reducing demand for raw materials can also require fewer imports of raw materials. See section 1002(c)(3) of RCRA where Congress found that "the recovery and conservation of such materials [separated from solid waste] can reduce the dependence of the United States on foreign resources and reduce the deficit in its balance of payments." Congress went on to find that "millions of tons of recoverable materials which could be used are needlessly buried each year," and that "methods are available to separate usable materials from solid waste." RCRA section 1002(c)(1)(2). The EPA further anticipates that there will be energy savings associated with increased utilization of recycling. For example, the recycling processes of secondary aluminum, lead, and glass are much less energy-intensive than the corresponding processes that use virgin raw materials. In short, the removal of recyclables and other materials from MWC feed streams advances the national policy "to promote the protection of human health and the environment and to conserve valuable material and energy resources by promoting a national research and development program for . . . new and improved methods of collection, separation, and recovery, and recycling of solid wastes . . ." RCRA section 1003(a)(9).

Congress authorized EPA to consider nonair quality environmental and energy benefits such as these as an important component of a Section 111 best technology determination. These significant nonair quality environmental and energy benefits cannot be assured without including a materials separation requirement as part of the standard of performance of MWC's. The EPA believes that Congressional intent would be best effectuated by reading the CAA as authorizing EPA to require removal of toxics and compostable and recyclable portions of the MWC feed stream prior to combustion. The statutory language does not prohibit such a standard (indeed, it would be incongruous for it to do so, given the statutory requirement to include nonair and energy considerations in the best technology determination), and appears broad enough to encompass the materials separation requirement.

Thus, a "standard of performance," which EPA establishes for new and



existing sources pursuant to section 111, is defined to include not only conventional emission limitations measured at the stack, but also other forms of emission restriction, including operating requirements and precombustion fuel conditioning requirements. See CAA section 302(1) (a "standard of performance" includes "any requirement relating to the operation or maintenance of a source to assure continuous emission reduction.") (emphasis added). Standards of performance must reflect the degree of "emission limitation" achievable, and an "emission limitation" is defined to include "any requirement relating to the operation or maintenance of a source to assure continuous emission reduction." CAA section 302(k). Under these provisions, removal of noncombustibles, toxics, recyclables, and compostables may be a "means of operating" an MWC in order to assure continuous emission reduction, and thus can be adopted as part of the section 111 standard of performance.

Other sections of the statute also support the EPA's interpretation that a section 111 standard of performance may include requirements expressed as other than traditional at-the-stack emission limits where necessary to achieve important air and nonair quality environmental and energy benefits. Section 111(a)(7)(B), for example, authorizes EPA to include "precombustion cleaning or treatment of fuels" as part of NSPS. See also H. Rep. No. 95-294 at 189.

(There may doubtlessly be many pretreatment techniques and/or process modifications capable of achieving comparable or improved degrees of emissions control in fossil-fired boilers as well as in most fuel-burn[ing] industrial sources \* \* \*. To this end, the Administrator should take into consideration all of the processing steps performed on a material from its natural state through to final usage in determining the requirements under this section for a technological continuous emission reduction system.) (emphasis supplied)

Separating noncombustibles like metals and glass from the feed stream to an energy-recovering MWC is indeed a type of precombustion cleaning of fuel, and consequently furthers the Congressional intent that EPA consider such measures as part of the section 111 standards of performance.

Some persons commenting on draft versions of this proposal suggested that the materials separation requirement could only be authorized as a "design, equipment, work practice, or operational standard" pursuant to CAA section 111(h). They went on to maintain that Section 111(h) does not give EPA the

authority to require removal of certain constituents from the MWC feed stream. The EPA questions whether the proposed materials separation requirement is a "work practice or operational standard." Certainly, the proposed requirement does not have the degree of mandated operating specificity that Congress sought to avoid in limiting the scope of work practice standards. The proposal does not require an MWC to carry out the proposed materials separation requirement in any particular way (by using particular types of equipment, for example). Rather, the proposal merely describes a minimal level of precombustion feed conditioning which can be achieved in many different ways (for instance, by relying on a variety of different community source separation programs, or by separating certain recyclables at the MWC while a community separates others).

Even assuming that the proposed materials separation requirement were considered to be a "work practice standard," however, EPA believes that it would be within the Agency's section 111(h) authority. The EPA may promulgate a work practice standard when "it is not feasible to prescribe or enforce a standard of performance." CAA section 111(h)(1). One statutory example of when it is not feasible to prescribe or enforce a standard of performance is when "the application of measurement methodology to a particular class of sources is not practicable due to technological or economic limitations." CAA section 111(h)(2). The legislative history indicates that Congress intended EPA to have authority to promulgate work practice standards when it finds that it is not feasible to develop or measure numerical concentration limits at the stack. See S. Rep. No. 95-127, 95th Cong., 1st Sess. 43, 44 (even though asbestos is capable of measurement, a work practice standard for asbestos was acceptable because of the impossibility of developing a numerical emissions standard).

In this case, EPA is presently unable to measure reliably the reductions in MWC emissions attributable to the removal of noncombustibles, recyclables, and compostables from MWC feed, and so is unable to reliably correlate at-the-stack measurements to materials separation technology. Thus, EPA is unable to develop numerical emissions standards reflecting the performance of materials separation technology. Since stack measurements and numerical standards would be technically impractical, EPA would be empowered to promulgate a "work practice" standard. The EPA also

believes that it would be economically and technically impracticable to monitor separately each of the toxics that are in the MWC feed stream (which potentially include each toxic in consumer use in an industrialized society) in order to document the toxics removal achieved by materials separation. The EPA requests comment on these issues.

More fundamentally, EPA also questions whether it is "feasible" to prescribe or enforce a numerical standard of performance within the meaning of section 111(h) where prescribing solely a top-of-stack numerical limitation would preclude obtaining significant nonair environmental and energy benefits which Congress has directed EPA to consider. The Agency solicits comment on how to interpret the interplay of these statutory provisions. The EPA also requests comment on the related question of how nonair quality and energy considerations are to be taken into account in assessing section 111(h)(3) equivalency demonstrations.

Several interested parties have also argued that the Agency is without authority to promulgate a work practice or operational standard if it also establishes a numerical at-the-stack emission limit for a pollutant. The EPA's current view is that this argument is not persuasive. The statute contains no express command preventing the Agency from adopting a fuel pretreatment or work practice standard as well as a numerical emission limit. Nor does the legislative history state that Congress meant to forbid such a two-part standard of performance. Under these circumstances, EPA may adopt reasonable interpretations of the statutory language that effectuate statutory goals, see *Chemical Manufacturers Association v. Natural Resources Defense Council*, 47D U.S. 1102, 1108 (1985), particularly where the interpretation assures important nonair and energy benefits and also assures an additional reduction in a pollutant regulated by a numerical standard.

#### F. Cost Impacts of the Proposed Standards

In the long run, the monetary benefits of materials separation and resale of separated materials are expected to outweigh the costs, resulting in no net annualized cost increase. However, the initial costs of materials separation at individual MWC plants will be highly variable. Depending on whether local markets are established for resale of materials, and other site-specific factors, disposal cost increases at typical new MWC plants could vary from a net



annualized cost of about \$20/Mg (\$18/ton) of MSW to a net credit (savings) of \$25/Mg (\$23/ton) of MSW (see Table 12). Even at the higher cost, the standards are acceptable. Higher costs would only be temporary and would decrease over time as markets for separated materials are established.

TABLE 12.—RANGES OF INDIVIDUAL PLANT CONTROL COSTS FOR THE PROPOSED MATERIALS SEPARATION ALTERNATIVE

Plant size (Mg/day)	Net annualized cost range (in \$1,000/yr and \$/Mg of MSW)	
	"Best" case: 100% sale of separated materials (net savings)	"Worst" case: No sale, land disposal of separated materials (net cost)
180	-1,400 *	580
	-\$25/Mg	\$11/Mg
730	-4,200	2,300
	-\$20/Mg	\$11/Mg
2,050	-5,400	12,100
	-\$9/Mg	\$20/Mg

\* Negative costs indicate net savings by materials separation.

Table 12 shows estimated ranges of net annualized costs and credits of materials separation for three different size MWC plants. These values include annualized capital costs for materials separation equipment and annual operating and maintenance costs. Other costs and credits included are: credits for reduced landfilling of ash; credits for reduced incineration costs due to downsizing of new MWC's (since separation would result in less waste to be combusted and would allow communities to build smaller MWC's); costs resulting from lost energy revenues (since less steam and electrical energy would be produced by the MWC due to reduced combustion of MSW); and credits for materials sales revenues. At the lower end of the cost ranges shown on Table 12, credits are taken for 100 percent sale of the following materials: glass, ferrous metals, aluminum, and high density polyethylene and polyethylene terephthalate plastics, while it is assumed the MWC pays a recycler to accept separated paper. At the higher end of the cost ranges, it is assumed that separated materials cannot be sold and must be landfilled. The no-sale assumption is a worst-case assumption. Markets for separated materials are already established in many locations. The proposed requirements for materials separation and other Federal, State, and local actions will promote stable supplies of separated materials and will encourage development and stabilization of markets. Additionally, the flexibility

provided sources by the form of the 25 percent materials separation requirement would allow sources to focus on the recycle of materials with the highest market value. Thus, the Agency believes there will not be a significant cost for materials separation over the long run.

Thus, despite the range of net costs and credits shown for individual plants in Table 12, the national net annualized cost of materials separation is estimated to be negligible (\$0/Mg of MSW) or a net savings over the long run. No severe economic impacts on households or government units are expected to result from the proposed materials separation provisions. (Also, see "Materials Separation—Combustion Permit" in Section H, "Compliance Provisions".)

#### G. Overall Agency Strategy to Promote MSW Reduction and Recycling

As discussed in Section IV.A. of this notice, in February 1988, EPA created an MSW Task Force to specifically address the problem of increasing waste generation and decreasing management capacity. The Task Force was given the assignment of assessing the solid waste problem, examining alternatives for solving it, and developing a well-coordinated strategy of action for improving the Nation's management of MSW.

In developing the strategy, the Task Force held public meetings and solicited comments from the public and interested environmental groups, trade organizations, and government organizations. The Task Force's recommendations are presented in the report, "The Solid Waste Dilemma: An Agenda for Action" (EPA/530-SW-88-052), and information supporting the recommendations can be found in a supplemental document entitled, "Background Document for Solid Waste Dilemma: An Agenda for Action" (EPA/530-SW-88-054A).

As stated in the "Agenda for Action," EPA "recommends using 'integrated waste management' systems to solve municipal solid waste generation and management problems at the local, regional, and national levels." \* \* \* A key element of integrated waste management is the hierarchy, which favors source reduction (including reuse) to first decrease the volume and toxicity and increase the useful life of products in order to reduce the volume and toxicity of waste. Recycling (including composting) is the preferred waste management option to further reduce potential risks to human health and the environment, divert waste from landfills and combustors, conserve energy, and

slow the depletion of nonrenewable natural resources." In the "Agenda for Action," EPA set a near-term "goal of managing 25 percent of our nation's municipal solid waste through source reduction and recycling by 1992." Furthermore, EPA expects the percentage of MSW reduction and recycling to continue to increase after 1992. A number of cities are already achieving the 25 percent materials separation requirements.

Source reduction and recycling help prevent many of the problems associated with MSW, including the difficulty of siting new landfills and MWC's to handle the large volumes of waste being generated. Preventing generation of wastes and diverting waste components from landfills and MWC's into reuse, recycling, or composting helps to alleviate siting problems and potential risks to human health and the environment attributable to improper management. Waste reduction and recycling also conserve natural resources by reducing the amount of virgin materials needed to produce new products. As the Congress found in promulgating RCRA in 1976, "Methods are available to separate usable materials from solid waste; and the recovery and conservation of such materials can reduce the dependence of the United States on foreign resources and reduce the deficit in its balance of payments." 42 U.S.C. 6902(c) (2) and (3). Thus, planning and implementing these activities now yields benefits in managing wastes and conserving natural resources in the years to come. The "Agenda for Action" strategy for implementing the Agency's national waste management goals are briefly summarized below.

The "Agenda for Action's" recommendations for recycling include fostering the implementation of existing Federal procurement guidelines (as well as evaluating guidelines for additional commodities), and creating an interagency working group to develop pilot and full-scale projects for separating recyclable materials in Federal agencies. Markets for secondary materials and recycled goods must be stimulated and stabilized; thus EPA will conduct market development studies for different commodities, will examine economic and regulatory incentives for using secondary or recycled materials, and will foster the formation of regional marketing councils for the exchange of market information. A National Recycling Council will be formed with members from all sectors of waste management to track recycling issues and problems and to recommend



actions. Finally, EPA will study how to foster the recycling of lead-acid batteries, including examining the current incentives and disincentives associated with liability. Today's proposed standards which prevent the combustion of lead-acid batteries will encourage their recycle. Also, in keeping with the "Agenda for Action," industry should step up its efforts in fostering the recycling of plastics and paper. State and local governments should encourage separation of recyclable materials, conduct waste exchanges, and provide incentives for stable markets for recycled goods.

During the development of this proposed rule, EPA contacted members of the MWC industry, State and local government organizations, and the environmental community in an effort to obtain their views and ideas regarding materials separation requirements as part of best demonstrated technology under Section 111. By today's action, the Agency is affirming its current position that materials separation is part of best demonstrated technology. However, during these discussions, a number of ideas and suggestions were discussed with respect to alternative approaches and strategies for incorporating materials separation as best demonstrated technology which the Agency wishes to discuss in an interactive policy forum. This forum will be scheduled to take place in early February 1990 during the public comment period for today's proposed rulemaking. The Agency anticipates that this forum will result in a series of suggestions and recommendations for Agency consideration during the development of the final rule.

While today's proposed materials separation requirements apply only to MSW being combusted in MWC's, as other related Federal standards are developed, the appropriateness of including materials separation provisions will be considered.

The EPA requests comments or recommendations on other actions that could be initiated by EPA to promote recycling and source reduction through the EPA's regulatory programs for MWC's.

#### H. Compliance Provisions

**Methodology Overview:** A number of alternatives were considered in developing the methods for determining compliance with the materials separation provisions. As proposed, compliance with the percent reduction requirement would be determined by comparing the amount of material recovered with the amount of incoming waste. The MWC would be required to

weigh all MSW received and combusted, and to weigh the materials separated for recovery, and keep monthly records. At the end of each calendar year (January through December), the annual average percent reduction of MSW (by weight) would be calculated from the monthly totals. The weights of vehicle and household batteries separated would also be recorded. The monthly recordkeeping and annual calculations to demonstrate compliance were determined to be reasonable because this approach would provide assurance that the separation provisions continue to be met on an ongoing basis. Furthermore, centralized MSW processing facilities and communities that are currently practicing separation generally keep such records. Therefore, the added reporting and recordkeeping burden of the proposal would be minimal. The alternative of not requiring an annual compliance demonstration was considered, but not selected for proposal.

In calculating compliance with the 25 percent or greater MSW weight reduction, a maximum credit of 10 percent would be given for yard waste separation, even if the separated yard waste weighs more than 10 percent of the weight of the MSW. The remainder of the required 25 percent MSW reduction would have to be achieved by separation of one or more of the other specified materials.

In calculating the weight of ferrous metals separated, white goods such as stoves, refrigerators, and air conditioners could be included; however, whole automobiles and other vehicles could not be included. Additionally, in calculating the weight of MSW received, and combusted and the weight of materials separated, construction and demolition wastes would not be included.

See Section I, "Reporting and Recordkeeping" for information on the schedules for compliance demonstration. Also, see "Materials Separation—Combustion Permit" in this section for a discussion of combustion permit provisions.

**Materials Separation Plan:** A description of the separation procedures (whether on-site or off-site) must be submitted along with the initial demonstration of compliance. Off-site materials separation programs will generally be more complex to monitor than on-site programs.

If an off-site source reduction or separation program is used to comply in whole or in part with the materials separation requirements, the adequacy of the separation program and

associated reporting procedures will be reviewed for approval on a site-specific basis. The off-site separation plan should provide a specific description of the program, including program elements related to the control of MSW flow, legal requirements and sanctions, and recordkeeping.

The plan should include a description of all procedures used to ensure control of the MSW flow. The following topics should be addressed, as applicable:

- The boundaries of the MSW service area(s) and any portions of the area(s) for which the MSW is delivered to landfills rather than an MWC;
- The ownership of waste from the time it is deposited at curbside to the time it is delivered to the MWC, landfill, materials recovery facility, recycling facility, or other treatment or disposal facility;
- Materials separation methods and destination of the MSW and each separated material (e.g., materials recovery or recycling facility, broker, MWC, landfill);
- Contractual arrangements, if applicable, between the MWC and the off-site party responsible for separation, and contractual arrangements between other involved parties, such as contracts between municipalities and private haulers of MSW;
- Any economic incentives for household participation in separation such as deposit/return systems on beverage bottles and cans or on batteries;
- Any economic incentives for active MSW haulers participation in the separation program (e.g., differential fees for deposit of waste at a recycling center versus an MWC);
- Any curbside separation requirements; and
- Provisions for separate collection of recoverable materials, and collection schedules (e.g., schedules for separate curbside collection of yard waste, glass, cans, white goods, etc.; location of community bins for drop-off of such materials).

The plan should also describe any legal requirements or sanctions that may be part of the off-site separation program. For example, copies of any local or State regulations requiring homeowners to separate yard wastes or other specified recoverable materials should be included. Copies of legislation (e.g., bottle bills) instituting deposit/return systems should also be included. Any penalties or sanctions for not following separation program requirements that can be applied to residences, private waste haulers, or other parties should be described.



The plan should also specify method(s) of demonstrating compliance with the materials separation provisions in the standards and should describe recordkeeping procedures. The following topics should be addressed, as applicable:

- Method(s) of determining the amount (by weight) of the recoverable materials specified in the standards, vehicle batteries, and/or household batteries (as applicable) that are separated on a monthly and annual average basis. Methods could include actual measurements using scales or calculational procedures;
- Method(s) for determining the amount (by weight) of MSW combusted (excluding construction and demolition waste) on a monthly and annual average basis. Methods could include actual measurements using scales or calculational procedures;
- Location(s) where weight determinations are made and which party is responsible (e.g., MWC, off-site material separation facility, transfer station, recycling facility, landfill);
- Recordkeeping procedures including type and frequency of information recorded, who is responsible for keeping records, location of records;
- Auditing procedures and frequency of audits; and
- Schedule and procedures for reporting monthly and annual weights of separated materials and other information to the MWC and the State regulatory agency or EPA.

**Contractual Arrangements:** In addition to developing a separation plan and submitting annual demonstrations of compliance, the proposed standards also allow the MWC owner or operator to enter into a contract with the governing body of any community or any other party whose action is required to maintain compliance.

Under Section 111 of the CAA, the owner or operator, which in the case of today's proposed standards is the owner or operator of the MWC, is responsible for demonstrating compliance with the standards. As discussed previously, in some cases, the owner or operator of the MWC may depend on another party to comply with some or all of the materials separation requirements at an "off-site" location. This does not prevent the owner or operator of the MWC from demonstrating compliance with these requirements by obtaining the necessary records from the off-site separator which show the weight of materials separated from the MSW and either the weight of MSW received by the off-site separator or the weight of processed MSW shipped by the off-site separator to the MWC. By this means, the owner

or operator of the MWC can monitor compliance with the materials separation requirements and based on this information take whatever steps are necessary to ensure continued compliance with these requirements. It does, however, make it more difficult and impose an additional administrative burden on the owner or operator of the MWC than if compliance with the materials separation requirements is achieved "on-site" at the MWC.

To minimize this administrative burden on the owner or operator of the MWC, in cases where the owner or operator of the MWC is depending on another party to demonstrate compliance with some or all of the materials separation requirements, today's proposal includes provisions that would allow other parties responsible for materials separation to become "co-operators" with the owner or operator of the MWC for purposes of demonstrating compliance with the materials separation requirements. These provisions apply *only* to the materials separation requirements and do not apply to other requirements or emission limits in today's standards. In addition, these provisions do not require parties performing off-site separation to enter into this relationship, they only provide the opportunity for this relationship where desired by both the owner or operator of the MWC and the other party performing off-site separation.

**Materials Separation—Combustion Permit:** The EPA is also proposing that best demonstrated technology for combustible MSW or RDF include a combustion permit for some of the separated materials under limited circumstances. In cases where a recycling market is shown to be unavailable for the separated combustible material, and the owner or operator of the MWC cannot recover or recycle other materials in the MSW or RDF, an application could be made for a combustion permit. A recycling market would be considered to be unavailable if, after separating the combustible material and searching for 120 days, an owner or operator could demonstrate to the Administrator either that no recycler will accept the material, or that the price the recycler is charging (including transportation costs) is equal to or exceeds the cost of landfilling (including transportation costs). The materials separation requirement would remain in force whether or not the Administrator granted a combustion permit. That is, materials would be separated whether or not a combustion permit were issued. For the material(s) covered by the combustion permit, records would be

maintained of the amount of material(s) separated (prior to combustion), and that would be the amount of separated (and combusted) material(s) credited toward the overall 25 percent MSW reduction requirement contained in the definition of "processed MSW" in the standard. The amount of other separated materials (not covered by the combustion permit) would have to be sufficient in combination with the separated (combusted) materials to achieve the overall 25 percent MSW reduction requirement (annual average). The combustion permit could be granted for a maximum of 1 year (without prejudice to filing petitions at later dates if recycling markets for combustibles continue to be unavailable).

The reason for this part of the proposal is that a large part of the reason EPA considers materials separation to be part of best demonstrated technology is to obtain environmental benefits from actually recycling the separated materials. If separated combustible materials actually prove to be unrecyclable after the owner or operator spends reasonable time and efforts to find a recycling market and the materials separation requirement cannot be satisfied by separating other materials, then the nonair environmental benefits from separating the material would no longer be demonstrated. Under such circumstances, it would not make sense to continue to preclude combustion of the separated materials, and to force their landfilling. The EPA believes it is preferable to burn the combustible materials in an MWC than to landfill them. Not only is landfilling a disfavored waste management option (see RCRA section 1002(b)(8)), but it is sound policy to recover the energy value of the combustibles rather than burying them (see CAA section 111(a)(1)(C) and RCRA section 1002(c)(1)). (The same is not necessarily true for noncombustible recoverables. If these are burned, the incinerator ash will contain the metals and other noncombustibles which will end up being land disposed in any case. This is why the proposal is limited only to combustible recoverables.)

The Agency is proposing that the test for unavailability of a recycling market for a particular material turn on a comparison of the cost of landfilling versus the cost of recycling. This test appears to be the relevant comparison because once combustion is precluded, these are the two principal management options for the separated material. If a material can be recycled for less expense than landfilling, it would be economically rational (as well as



environmentally preferable) to recycle the material, even if the recycler has to be paid to take the material.

The EPA is also proposing that the owner or operator must demonstrate to the Administrator that recycling markets are unavailable. The authority to issue combustion permits will not be delegated. This demonstration would require documentation of the recyclers that the owner or operator of the MWC has contacted, and a documentation of the costs of recycling versus the costs of landfilling. The EPA is proposing that a market be unavailable for at least 120 days before a petition could be considered because market fluctuations can be a short-term phenomenon and because owners or operators appear to be able to store combustibles for greater than this amount of time while seeking recycling markets. A petition would have to be approved by the Agency before the combustibles could be burned and the duration of the exception could not exceed 1 year. (If markets continue to be unavailable after 1 year, another petition could be made.) Both of these conditions appear necessary to EPA to ensure maximum effort to comply with the materials separation requirement and to actually recycle separated combustible materials.

Permits may be renewed for an additional year if the Regional Administrator determines it is appropriate and the conditions specified in § 60.56a(h)(1) continue to be met.

Comments are also specifically solicited on whether, under certain circumstances, the requirement to separate materials for which a combustion permit has been granted under 40 CFR 60.56a(h) should be dropped. The Agency specifically solicits comments on what criteria could be used to determine whether a source or community would not have to separate materials for which they receive a permit to burn the waste.

The following example illustrates how EPA envisions the exception would operate:

A community operating an MWC separates newspapers from the MSW burned in its MWC. During a 4-month period, the community is unable to recycle the newspapers because the best arrangement they can make involves paying a recycler \$40 per ton to take the newspapers (including transportation cost). (Other recyclers will not take the newspapers for any price.) The cost of landfilling the newspapers is \$30 per ton (including transportation cost). Newspapers comprise 8 percent of the materials that are separated from the MSW and the community can demonstrate that it is unable to separate

8 percent of recoverables other than newspapers (in order to achieve an overall 25 percent materials separation). Under these circumstances, the Administrator could grant the combustion permit for newspapers for up to 1 year. Upon grant of the permit, the MWC could burn newspapers and would achieve credit for the newspaper separation based on the weight of newspaper separated, just as if they had been recycled.

**Enforcement Guidance:** Following adoption of standards, the Agency frequently develops enforcement guidance for use in enforcement actions to ensure consistent and uniform enforcement of the standards. This guidance outlines the steps the Agency will likely follow, depending on the merits of the situation in question, in taking enforcement actions when violations of the standards occur. In this guidance, the Agency balances the seriousness of the violation against the potential impacts associated with various remedies. Thus, in the case of today's proposed standards, the Agency would consider the impacts of any remedy to a violation on waste management in a community, particularly the potential for waste not to be collected or to be diverted to a less desirable disposal alternative than combustion.

One of the primary objectives of an enforcement action is to prevent further noncompliance, and this is often achieved by negotiating a settlement agreement with the noncomplying source that ensures that the source will come into compliance with the standards. In the case of today's proposed standards, this could involve working with the owners or operators of the source to identify those actions necessary to achieve compliance and the time required to implement such actions.

If, as an example, the owner or operator of the MWC failed to comply with the materials separation requirements in today's standards, and the owner or operator is dependent on another party to provide processed waste, a review of the reason for noncompliance may indicate that the materials separation system utilized by this other party needs to be altered in some manner to ensure achieving the 25 percent separation requirement. This could necessitate installation of additional separation equipment or changes in local waste management practices, such as purchase of additional trucks and hiring of additional personnel for waste collection, or the adoption of local ordinances with financial

incentives or fines to ensure more intensive curbside separation efforts.

Such changes would require time to implement. One remedy to a violation of the materials separation requirements might well be a consent agreement between the enforcement agency and the owner or operator of the MWC and/or other party responsible for separation, where the other party has agreed to be a co-operator for purposes of compliance with the materials separation requirements. The consent decree might permit the MWC to burn unprocessed waste for a limited period of time if the necessary additional equipment or changes to the waste management system are made to ensure compliance with the materials separation requirements at the end of a specified period of time.

Of course, in cases of continued and repeated noncompliance, enforcement actions seeking shutdown of the MWC may be taken. In any event, the Agency solicits comments on enforcement guidance that might be developed following promulgation of today's standards and on possible remedies that might be sought in response to various violations.

#### *1. Reporting and Recordkeeping Requirements*

The proposed standards would require that the Administrator be notified of the initial MWC startup for all affected facilities. At the time of submittal of the initial compliance demonstration for materials separation (i.e., at the end of the second calendar year after initial start-up) an MWC facility would be required to submit a description of the procedures for separating materials for recovery to achieve the overall MSW reduction requirement and a description of the procedures for ensuring that lead-acid vehicle batteries would not be combusted at the affected facility. The facility must also submit a description of the collection program for household batteries. If an off-site separation program is used, the plan describing the program and compliance methods would be submitted for approval at the time of submittal of the initial compliance demonstration.

The proposed standards would require all affected facilities to submit annual compliance reports to show the overall percent reduction of MSW achieved by separation of the specified materials. The annual percent reduction would be calculated for each calendar year (January through December) from the monthly total weight of MSW received and weight of materials



separated for recovery each month, including any credits for a community source reduction or separation program. The first annual report submitted at the end of the first full calendar year (January through December) after start-up of an MWC would not be used to determine compliance with the materials separation requirements, but would be used to review progress made toward the materials separation requirements. The initial demonstration of compliance with the materials separation requirements would not be calculated and reported until the end of the second full calendar year (January through December) after start-up. For MWC's that commence construction between proposal and promulgation, the initial compliance demonstration (annual average) would not be calculated and reported until the end of calendar year 1994 or the second full calendar year after start-up, whichever is later. The annual average percentage MSW weight reduction would be calculated and reported at the end of all following years.

The proposed standards would also require that certain types of records be maintained, beginning at the initial start-up of an MWC (or in January 1993 for MWC's that commenced construction between proposal and promulgation). The records to be maintained include: the amount (by weight) of MSW received on a monthly basis at the affected facility, the amount (by weight) of MSW combusted on a monthly basis in the affected facility, and the amount of materials (by type and weight) on a monthly basis that is separated for recovery; the amounts (by weight) of vehicle batteries and household batteries on a monthly basis that are separated for recovery; the estimated amount (by type and weight) of materials reduced or separated for recovery on a monthly basis through an off-site or community source reduction or materials separation (recycling) program; and the calculations of the annual average percentage reduction in MSW achieved for each calendar year (January through December).

#### *J. Solicitation of Comments on Materials Separation Requirements*

The EPA welcomes comments on all aspects of the proposed materials separation provisions, and has specifically identified several topics on which comments and information are requested.

First, the Agency solicits comments on the proposed 25 percent materials reduction level and the associated air emission and other environmental benefits expected to result from

materials separation. The EPA requests information on potential separation techniques and on whether a higher or lower percent reduction is more reasonable.

In particular, during development of the proposed standards, it was suggested by some that 15 percent MSW reduction would be more reasonable, however others have suggested that 40 percent would be preferable. Those who support a lower percent reduction (e.g., 15 percent) should provide information on specific difficulties in achieving the 25 percent reduction as defined in the proposal, and describe their basis for stating that 15 percent (or some other number) is more reasonable than 25 percent. Those supporting a higher percent reduction (e.g., 40 percent) should provide specific information showing the 40 percent (or another number above 25 percent) is achievable using demonstrated technologies, and is reasonable.

Comments are requested on the proposed prohibition on combustion of vehicle batteries and the plan to remove household batteries, and the practicality of on-site or off-site separation programs for battery removal.

The EPA is aware that different areas have different MSW disposal problems. Accordingly, comments are solicited on the following questions. Should the 25 percent MSW reduction be uniformly applied to all areas of the country, or should there be different requirements for urban areas, residential areas, metropolitan areas, and rural areas? Should the stringency of the materials separation requirements vary for different MWC's depending on the type of area, but still be designed to achieve an overall 25 percent reduction on a national basis? How would the areas be defined?

Another approach to separation that was considered, but not selected for proposal, was specification of a percent reduction (by weight) for each individual recoverable material in MSW (e.g., a certain percent of the paper in MSW must be separated for recovery, a certain percent of ferrous metals, etc.). For reasons stated previously, the overall 25 percent weight reduction was chosen for proposal. However, comments are requested on the material-specific percent reduction approach. Commenters should include the reasons they favor or do not favor this approach, and submit information on the percent separation achievable for specific materials. Supporters of a material-specific percent reduction approach are also asked to suggest methods of demonstrating compliance. It

would be more difficult to demonstrate compliance with material-specific percent reductions because the weight of each material (e.g., paper, plastics, etc.) in the unseparated MSW would need to be known in order to determine the percent of the material that was separated. The content of unprocessed MSW is variable depending on factors such as climate, type and number of residences, and type and number of commercial businesses that produce MSW in the community. There is also seasonal variation in MSW content. Commenters should address how the owner or operator of the MWC could determine the weight of each specific material in the unprocessed MSW.

The Agency further solicits comments on whether other types of materials should be included in the list of recoverable materials that can be separated. The Agency is aware of arguments that recovering and stockpiling recovered materials, such as batteries, may create a separate environmental hazard.

The Agency is aware of arguments that separation and recovery of materials from the MSW stream may result in delay or cancellation of MWC projects and/or the landfilling of some separated materials, thereby potentially increasing the amount of waste disposed of in landfills. The Agency is also aware, however, that once materials are separated, there is an economic incentive to recycle the separated materials which ranges up to the cost of alternative disposal at a landfill. Since landfill costs are substantial, this economic incentive to recycle is also substantial. The Agency solicits comments on these issues. In particular, the Agency is interested in receiving comments concerning the relative multimedia environmental impacts of MSW disposal by landfilling versus combustion.

Suggestions are also requested on ways to implement the materials separation requirements to minimize the burden for MWC owners or operators and the communities they serve. For example, what compliance schedule is most reasonable? (An alternative approach that would phase in separation requirements is discussed in the next section.)

There are several implementation issues associated with off-site separation programs. The proposed standards would allow off-site source reduction or source separation programs to be used to comply, in whole or in part, with the materials separation requirements. For example, if the MWC service area collected yard waste,



paper, glass, aluminum cans, and/or other materials separately and did not combust these collected materials, credit toward the 25 percent MSW reduction would be given. The prohibition on combustion of lead-acid vehicle batteries could also be achieved through off-site programs. In these cases, MWC's would be required to submit a plan describing the off-site or community program and the means of verifying compliance. Section H describes the type of information that should be included in such plans. Comment is requested on how to structure such plans, how to determine compliance where community programs are used, what type of measurement methods could be used, and what types of records should be kept. Comments are specifically requested on how to give credit for source reduction programs (e.g., where commercial businesses or households reduce the amount of waste generated) and for backyard composting of yard waste at the household level.

The EPA also solicits comment on the timing for submitting a materials separation plan. It may make more sense to submit the plan at the time of initial start-up rather than as part of the initial compliance demonstration so that there is time to evaluate the adequacy of the procedures described in the plan.

Finally, the EPA requests comments concerning the contractual provisions previously discussed in Section H. The proposed standards allow the MWC and parties performing off-site separation to enter into a contractual agreement designating the party performing off-site separation as a co-operator of the MWC regarding compliance with the materials separation requirements. In this way, where off-site materials separation programs are used, enforcement actions for noncompliance with the materials separation provisions could be taken against the off-site MSW processor responsible for the violation. The EPA requests comment on the feasibility of such contract provisions, and on other approaches for the enforcement of materials separation provisions.

#### *K. Solicitation of Comment on Alternative Phase-in of Materials Separation Requirements*

The "Agenda for Action" requires a 25 percent MSW reduction through source reduction and recycling by 1992, but also calls for increasing the percent reduction level to higher levels after 1992. The proposed MWC standards would also establish a 25 percent reduction level. However, greater percent removals may be achievable. As markets for separated materials

strengthen and expand, higher percent separation levels will become more feasible technically and economically. The Agency solicits comments on whether materials separation standards for MWC's should require phasing-in of more stringent requirements over time.

One alternative that was considered and rejected was a three-step phase-in of materials separation requirements. This approach would be similar to the proposed standards in that all MWC's would be prohibited from combusting MSW unless the MSW had been processed to separate materials for recovery achieving a specified percent overall reduction (by weight) of the MSW. However, the percent reduction of MSW would be less than 25 percent through 1992; after 1992 it would be 25 percent, consistent with the "Agenda for Action;" and after some later date (e.g., 1995) a higher percent reduction (e.g., 40 percent) would be required. After consideration, it was determined that there is no need to specify a reduction level lower than 25 percent prior to 1992. Only new MWC's, which commence construction after today's date would be subject to this NSPS. Given that for MWC's there is generally a 2-year or longer time period from commencement of construction until facility start-up, most of these new MWC's would not be operating until 1992 or later, and would not have to demonstrate compliance with the materials separation provisions until the second year of operation of the materials separation system. Thus, specifying a different percent reduction before 1992 would be of little use.

The proposed regulations, therefore, start with the requirement for a 25 percent reduction of MSW. The Agency requests comments on whether the 25 percent separation requirement should be phased-in under some other schedule and on whether higher performance levels should be established in subsequent years and if they should be phased-in with one or two steps. Specifically, comments are requested on the desirability of increasing the 25 percent separation level to 40 percent by December 1995.

#### *L. Potential Alternative Approach for Requiring Materials Separation*

The Agency also considered an alternative approach for requiring materials separation from MWC's. Rather than including materials separation directly in the NSPS, the Agency could issue new source permitting guidance which would require States to consider and include materials separation requirements in new MWC permits unless there is a site-specific reason that separation is not

appropriate. This operational guidance would then be used by States and local agencies in making best available control technology (BACT) determinations for prevention of significant deterioration (PSD) permitting and lowest achievable emission rate (LAER) determinations for new source review (NSR) permitting. This approach would allow more flexibility in regulating individual MWC's, and the economic implications of applying materials separation to new MWC's could be judged on a case-by-case basis. Under this permitting approach, if local markets for separated materials are poor, a new MWC might not be required to apply materials separation.

However, under the current CAA (1977), once an NSR permit is issued, it is final unless the method of MWC operation is changed. This would mean that if a local materials separation market did not exist at the time of initial operation and separation was not required, the NSR permit could not be changed to require separation when a market did develop. This would not encourage market development. Under some of the CAA amendments under consideration, NSR permits would be reviewed every 5 years. If such provisions were included in the CAA, the feasibility of materials separation could be reevaluated at each 5 year renewal. The EPA requests comments on the alternative approach of implementing materials separation at new MWC's through NSR permitting.

#### *M. Spokane and Huntington Remands*

The Administrator has recently denied two appeals involving (in part) the issue of whether materials separation is part of BACT in PSD permits issued to MWC's. *Spokane Regional Waste-to-Energy Project*, PSD Appeal No. 88-12 (June 9, 1989) and *Huntington Mass-Burn Incinerator*, PSD Appeal No. 89-2 (August 2, 1989). The EPA denied both appeals, concluding that the petitioners had failed to show that materials separation was part of BACT for the facilities at issue.

The EPA does not view these petition denials as precluding requiring materials separation as part of the Section 111 NSPS and guidelines for existing sources. In the first place, all that was at issue in these appeals was whether petitioners had met their burden of showing that the PSD permit determination not to include a separation requirement was clearly erroneous. *Spokane Appeal* at p. 3. The EPA is under no such burden in the present rulemaking. Further points of



distinction are that the Agency was not asked to review the relation of materials separation to all MWC emissions and thus did not consider certain types of pollutant emission reductions (for example, petitioners made no specific assertions regarding the overall life cycle benefits of materials separation, and also did not consider the nonair quality environmental benefits of materials separation in detail, an important factor in making Section 111 determinations.) Furthermore, although BACT determinations can have national precedential effect, EPA believes that a proposed decision of national import to require MWC's to perform materials separation can be more appropriately made in the context of a national rulemaking even if the Administrator declines to do so in deciding an individual PSD appeal.

The Administrator further stated that in denying these appeals that petitioners had failed to show that materials separation technologies were "available" (within the meaning of the definition of BACT contained in Section 169(3) of the CAA) for MWC's because petitioners had failed to show that use of materials separation in combination with other air pollution control technology would lead to a demonstrable reduction in emissions of regulated pollutants. *Spokane Appeal* at p. 22. The EPA has included, as part of the record of this proposed rulemaking, data (some of which were not presented to EPA by petitioners in the respective PSD appeals) showing reduction in MWC emissions through use of materials separation. Although these studies do not deal with situations where materials separation was used along with the best demonstrated technology-type of air pollution control technology, it is the Agency's engineering judgment that a reduction of pollutant input into an MWC will result in the MWC emitting fewer of these pollutants. Furthermore, with respect to new sources, materials separation will allow for downsizing of MWC's (because a lower volume of material will need to be combusted), which will in turn lead to a reduced mass of MWC emissions, cf. RCRA Section 4003(d) ("it is the intention of this chapter and the planning process established pursuant to this chapter that in determining the size of the waste-to-energy facility, adequate provision shall be given to the present and reasonably anticipated future needs of the recycling and resource recovery interest within the area encompassed by the planning process"). In contrast, the option of downsizing the MWC's at issue in

Spokane and Huntington was not available. Given that separation technologies are demonstrated for all of the types of materials considered in today's rule, that materials separation results in documented reduction in MWC emissions regulated under the proposal, and the Agency's judgment that these reductions would continue even if the MWC is also equipped with at-the-stack air pollution control technology, the Agency believes that materials separation is a demonstrated technology for new MWC's under Section 111.

#### VI. Rationale for the Standards for Nitrogen Oxides (NO<sub>x</sub>)

##### A. Selection of NO<sub>x</sub>

Municipal waste combustors (MWC's) are a significant source of NO<sub>x</sub> emissions. As the number of MWC's increases (over 150 new MWC's are projected to be built in the next 5 years), there is increasing concern over NO<sub>x</sub> emissions, and control of NO<sub>x</sub> is being considered in new source permitting decisions.

From an environmental perspective, NO<sub>x</sub> emissions are of increasing concern. Furthermore, minimizing the increase in NO<sub>x</sub> from this source category is consistent with Administration policies embodied in the President's Clean Air Act legislation and the International NO<sub>x</sub> Protocol. Reasons for concern include: acid deposition; increased regional/global ozone background concentrations (which may be NO<sub>x</sub> limited); untold nutrient effects on some natural waters, including estuaries; visibility/PM<sub>10</sub> problems in western cities; and potential effects of transformation products of NO<sub>x</sub>. Current regulations do not prevent projected increases in NO<sub>x</sub> emissions, and total U.S. emissions of NO<sub>x</sub> are already almost equal to emissions of sulfur oxides (SO<sub>x</sub>). Although insufficient information is available to design a strategy for major reductions in NO<sub>x</sub>, a growing consensus supports establishing limits to prevent continued increases in emissions. The possibility of using cost-effective controls on existing sources appears limited; therefore, controls for new sources must be the basis for any strategy to further restrict increased emissions. The EPA is also concerned about other major sources of NO<sub>x</sub>. As standards for these other sources are established or reviewed, EPA will consider a similar approach for controlling NO<sub>x</sub>.

Municipal waste combustors are significant sources of NO<sub>x</sub> emissions. For example, in the absence of additional regulation, a typical large

mass burn MWC with a design capacity of 2,040 Mg/day (2,250 tons/day) will emit about 1,180 Mg (1,300 tons) of NO<sub>x</sub> each year. A medium-size 950 Mg/day (1,050 tons/day) MWC plant will emit about 550 Mg (610 tons) of NO<sub>x</sub> each year. Without the NO<sub>x</sub> standards proposed today, national emissions of NO<sub>x</sub> from MWC's could increase by almost 30,000 Mg/year (33,000 tons/year) by 1994.

National ambient air quality standards have been established for NO<sub>x</sub> because of known adverse effects on public health and welfare. Impacts of NO<sub>x</sub> have been documented in criteria documents prepared under section 108 of the Clean Air Act (CAA). These effects are the primary basis for determining that NO<sub>x</sub> emissions from new MWC's constitute a potential danger to public health and welfare. Consequently, NO<sub>x</sub> emissions are also selected for control under new source performance standards (NSPS) for MWC's.

##### B. Selection of Best Demonstrated Technology for NO<sub>x</sub> Control

*Types of Combustors:* Nitrogen oxides are formed during combustion through oxidation of fuel-bound nitrogen (i.e., nitrogen contained in municipal solid waste [MSW]) and fixation of atmospheric nitrogen. Conversion of fuel-bound nitrogen occurs at relatively low temperatures (less than 1,100°C or 2,000°F), while fixation of atmospheric nitrogen generally occurs at higher temperatures. Most of the NO<sub>x</sub> formed during normal operation of MWC's is associated with fuel-bound nitrogen. All types of MWC's produce NO<sub>x</sub> emissions, and emission levels are similar for the four types of MWC's (mass burn, modular, refuse-derived fuel [RDF], and fluidized-bed combustion [FBC]).

*Emission Control Techniques for NO<sub>x</sub>:* Two basic approaches are used to control NO<sub>x</sub> emissions: (1) Combustion modifications and (2) add-on controls. Combustion modifications include staged combustion, low excess air, and flue gas recirculation. Combustion modification techniques reduce NO<sub>x</sub> emissions by controlling the amount of oxygen and the temperature in the combustion zone. Two combustion modification NO<sub>x</sub> control techniques, low excess air and staged combustion, can be used separately or together. With low excess air, the amount of air (oxygen) supplied to the combustor is reduced, lowering the oxygen (O<sub>2</sub>) concentration in the flame zone and reducing the formation of thermal NO<sub>x</sub>. With staged combustion, the amount of underfire air at the grate is reduced.



generating a starved-air region. Secondary air to complete combustion is added as overfire air after the combustion gas has partially cooled. By creating a starved-air zone, fuel-bound nitrogen is converted to nitrogen ( $N_2$ ) instead of  $NO_x$ . When the  $O_2$  for completing combustion is provided, the reduced temperature slows the formation of  $NO_x$ . This technique can reduce formation of fuel  $NO_x$ . Consistent and quantifiable  $NO_x$  reductions, however, have not been demonstrated for low excess air or staged combustion technologies applied to MWC's.

Another combustion modification technique is flue gas recirculation. In flue gas recirculation, cooled flue gas is mixed with combustion air, thereby reducing the  $O_2$  content of the combustion air supply. The flame temperature is lowered and less  $O_2$  is present in the flame zone, reducing thermal  $NO_x$  generation. At one mass burn MWC in California, where flue gas recirculation is used to supply 10 percent of the underfire air, reductions of about 15 percent in  $NO_x$  emissions have been observed. Reductions of 10 to 25 percent were reported for a Japanese MWC using flue gas recirculation.

Combustion modifications for  $NO_x$  control generally do not increase emissions of other pollutants. However, if the modifications are not properly applied, higher emissions of carbon monoxide (CO), hydrocarbons, and products of incomplete combustion may result. For example, if the excess air is decreased too much, visible emissions and higher CO concentrations may result. If too much flue gas is recirculated, the flame zone can become unstable, causing poor combustion and higher CO and organic emissions.

Potential add-on controls for MWC's include selective noncatalytic reduction (SNCR), selective catalytic reduction (SCR), and natural gas reburning techniques. Selective noncatalytic reduction refers to add-on  $NO_x$  control techniques which reduce  $NO_x$  to  $N_2$  without the use of catalysts. These techniques include Thermal  $DeNO_x^{tm}$ , which uses injection of ammonia into the combustor as the reducing agent; the  $NO_x$ OUT process, which injects urea and chemical additives; and a two-stage urea/methanol injection process. To date, only Thermal  $DeNO_x^{tm}$  has been demonstrated on full-scale MWC's in the U.S., and it is in use at three MWC plants in California.

In Thermal  $DeNO_x^{tm}$ , ammonia is injected into the convection section of the combustor where temperatures are between 860°C (1,600°F) and 970°C (1,800°F) (the optimum reaction temperature range). Based on short-term

testing and continuous emission monitoring data from the three MWC plants in California with Thermal  $DeNO_x^{tm}$  controls and other information, removal efficiencies of about 45 percent or more and  $NO_x$  emission levels in the range of 120 to 200 ppmv (24-hour average) are achievable. However, the precise level within this range has not yet been specified. Emission levels vary among MWC's and may differ for different types of MWC technologies. Additional long-term  $NO_x$  emission data are currently being collected and analyzed. The emission level(s) and/or percent reductions achievable by SNCR will be determined prior to promulgation, and a single emission limit will be promulgated. Alternatively, there may be different limits promulgated for different subcategories of MWC technologies.

One potential concern associated with noncatalytic ammonia injection technology is the potential for formation of detached ammonium chloride plumes. At two of the facilities, visible plumes have sometimes formed, which are believed to be caused by the reaction of residual ammonia and chloride after the flue gas exits the stack. The formation of such plumes appears to depend on site-specific factors involving the design and operation of the combustor, the efficiency of the acid gas and particulate matter (PM) control devices at removing HCl and ammonia from the flue gas, the  $NO_x$  control equipment, and meteorological conditions.

In SCR, ammonia is injected into the flue gas downstream of the combustor where it is mixed with the  $NO_x$  contained in the flue gas and passed through a catalyst bed. In the catalyst bed,  $NO_x$  is reduced to  $N_2$  at temperatures much lower than the 860 °C (1,600 °F) required for the reactions to occur without a catalyst. Depending on the type of catalyst, these reactions occur at temperatures of 190 to 400 °C (375 to 750 °F). Tests of SCR systems at two MWC's in Japan and at coal- and oil-fired facilities in the U.S. indicate potential  $NO_x$  removal rates well above 45 percent, but these systems have not been applied to MWC's in the U.S. One concern is that performance can be detrimentally affected by catalyst poisoning by either metals or acid gases. Furthermore, these systems are more expensive than SNCR control systems. In some cases, since ammonia is injected into the flue gas rather than the combustor, and catalyst beds may be located after economizers on PM control devices, flue gas reheat may be necessary to reach the desired catalyst operating temperature. This can be a significant expense.

Natural gas reburning is an add-on  $NO_x$  control technique that overlaps combustion modification techniques. Low excess air is provided at the combustor grate, with recirculated flue gas introduced above the grate. Natural gas is added to this low excess air zone to generate a fuel-rich zone. Air is supplied above the fuel-rich zone to complete combustion. This process is designed to reduce  $NO_x$  formation without generating CO emissions.

Natural gas reburning at MWC's is a new technology. A pilot-scale test of an MWC indicated average  $NO_x$  removal efficiencies of about 50 percent and  $NO_x$  emissions below about 150 ppmv. There are also pilot-scale data on reburning for coal-fired (pulverized coal-type) boilers. However, this technology has not been commercially applied on either MWC's or coal-fired boilers in the U.S. Reburning with oil has been used on coal-fired boilers in Japan.

**Regulatory Alternatives for  $NO_x$  Control:** A regulatory baseline and three  $NO_x$  control regulatory alternatives were analyzed in selecting standards for proposal. The baseline alternative reflects the level of emissions control expected in the absence of an NSPS. In this case, the baseline alternative assumes no  $NO_x$  control on any new MWC's.

The three  $NO_x$  regulatory alternatives represent application of  $NO_x$  control to some or all MWC plants. Controlled  $NO_x$  emission levels are based on SNCR technology, because this technology is considered to be well demonstrated. As described previously, the use of SNCR for  $NO_x$  control will achieve a  $NO_x$  emission limit in the range of 120 to 200 ppmv on a 24-hour daily (block) average basis. The exact emission limit(s) or percent reduction requirements will be determined prior to promulgation, and a single emission limit will be promulgated. Alternatively, there may be different emission limits for different subcategories of MWC technologies. An owner or operator could comply with the applicable emission limit using any technology.

Table 13 presents the three regulatory alternatives. The first two alternatives include a size cutoff, and would only require control of larger plants. This is because: (1) Smaller plants have lower annual  $NO_x$  emissions and account for a relatively small percentage of the new MWC population, and (2) capital cost increases, annual costs (in terms of \$/Mg MSW combusted), and cost effectiveness of control (\$/Mg  $NO_x$  removed) are greater for smaller MWC's than for large MWC's. Previous NSPS for  $NO_x$  emissions from combustion



sources have been less than \$1,000/Mg (\$900/ton) NO<sub>x</sub> based on the use of combustion modifications.

TABLE 13.—REGULATORY ALTERNATIVES FOR NO<sub>x</sub> CONTROL FOR NEW MWC PLANTS

Regulatory alternative	MWC plant sizes regulated	Percent of national MWC capacity affected
1	> 800 Mg/day.....	70
2	> 225 Mg/day.....	90
3	All plants.....	100

Under Regulatory Alternative 1, a NO<sub>x</sub> emission limit of 120 to 200 ppmv would be proposed for MWC units located at MWC plants with aggregate capacities greater than 800 Mg/day (880 tons/day) of MSW. This limit would affect about 70 percent of national new MWC capacity. Under Regulatory Alternative 2, a NO<sub>x</sub> emission limit of 120 to 200 ppmv would be proposed for MWC units at plants with capacities above 225 Mg/day (250 tons/day) of MSW. This limit would affect about 90 percent of new MWC capacity. Regulatory Alternative 3, the most stringent alternative, would require NO<sub>x</sub> control for all MWC plants regardless of size. This alternative has

the lowest emissions, but the highest costs.

*Model Plant Impacts of the Regulatory Alternatives for NO<sub>x</sub> Control:* Under the regulatory alternatives shown in Table 13, those plants that are affected would emit NO<sub>x</sub> in concentrations below the emission limit (120 to 200 ppmv). In Table 14, the ranges of annual NO<sub>x</sub> emissions for individual model plants under the baseline and the regulatory alternatives are presented. These emission impacts were estimated by applying NO<sub>x</sub> control technology (SNCR) to the various size groups of MWC plants as specified by the regulatory alternatives.

TABLE 14.—RANGE ON NO<sub>x</sub> EMISSIONS FOR INDIVIDUAL MWC PLANTS UNDER THE BASELINE AND REGULATORY ALTERNATIVES FOR NO<sub>x</sub> CONTROL

Regulatory alternative	MWC plant sizes regulated	NO <sub>x</sub> Emission (Mg/year)		
		Very large plants	Large plants	Small plants
Baseline.....	None.....	550-1,300	260-420	16-130
1.....	> 800 Mg/day.....	300-710	260-420	16-130
2.....	> 225 Mg/day.....	300-710	140-230	16-130
3.....	All plants.....	300-710	140-230	9-70

As shown in Table 14, baseline NO<sub>x</sub> emissions at very large MWC plants (i.e., MWC plants with aggregate capacities greater than 800 Mg/day [880 tons/day] of MSW) range from 550 to 1,300 Mg/year (600 to 1,400 tons/year). Under each of the three regulatory alternatives, very large plants are required to control NO<sub>x</sub> emissions, resulting in NO<sub>x</sub> emissions ranging from 300 to 710 Mg/year (330 to 780 tons/year).

At those large MWC plants that combust greater than 225 Mg/day (250 tons/day) of MSW but equal to or less than 800 Mg/day (880 tons/day) of MSW, baseline NO<sub>x</sub> emissions range from 260 to 420 Mg/year (290 to 460 tons/year). These intermediate-size large plants would not be required to

control NO<sub>x</sub> emissions under Regulatory Alternative 1, but would be required to meet the NO<sub>x</sub> emission limit under Regulatory Alternatives 2 and 3. Under Alternatives 2 and 3, NO<sub>x</sub> emissions at these large MWC plants would range from 140 to 230 Mg/year (150 to 250 tons/year).

Baseline NO<sub>x</sub> emissions at small MWC plants (i.e., MWC plants with aggregate capacities equal to or less than 225 Mg/day [250 tons/day] of MSW) are low relative to large plants and range from 16 to 130 Mg/year (18 to 140 tons/year). Small plants would not be required to control NO<sub>x</sub> emissions under Regulatory Alternatives 1 or 2, but under Regulatory Alternative 3, NO<sub>x</sub> emissions at small MWC plants would

be reduced to a range of 9 to 70 Mg/year (10 to 77 tons/year).

Table 15 presents the ranges of increased capital costs (relative to baseline), increased annualized costs, and increased (over baseline) annualized cost per Mg of MSW combusted for small, large, and very large MWC plants under each regulatory alternative. The cost per Mg of MSW is a measure which can be used to compare impacts for different size plants on a common basis. For perspective, MSW disposal costs incurred by the general public typically range from about \$40/Mg (\$36/ton) to over \$100/Mg (\$90/ton) of MSW, including collection, transportation, combustion, and ash disposal.

TABLE 15.—RANGES OF INDIVIDUAL PLANT CONTROL COSTS UNDER THE REGULATORY ALTERNATIVES FOR NO<sub>x</sub> CONTROL

	Capital cost (\$1,000's)	Annualized cost (\$1,000's)	Annualized cost per Mg MSW (\$/Mg)
Regulatory Alternative 1:			
Very large plants.....	2,200-3,700	660-1,200	1.70-2.40
Large plants.....	0	0	0
Small plants.....	0	0	0
Regulatory Alternative 2:			
Very large plants.....	2,200-3,700	660-1,200	1.70-2.40
Large plants.....	2,000	550-580	2.40-3.60
Small plants.....	0	0	0
Regulatory Alternative 3:			
Very large plants.....	2,200-3,700	660-1,200	1.70-2.40
Large plants.....	2,000	550-580	2.40-3.60



TABLE 15. RANGES OF INDIVIDUAL PLANT CONTROL COSTS UNDER THE REGULATORY ALTERNATIVES FOR NO<sub>x</sub> CONTROL—Continued

	Capital cost (\$1,000's)	Annualized cost (\$1,000's)	Annualized cost per Mg MSW (\$/Mg)
Small plants.....	620-1,000	190-280	7.40-20.10

Under each of the three alternatives, increased cost per unit of MSW combusted at very large MWC plants (i.e., those combusting greater than 800 Mg/day [880 tons/day] of MSW) ranges from \$1.70 to \$2.40/Mg (\$1.50 to \$2.20/ton) of MSW.

Under Regulatory Alternative 1, intermediate-size large plants (i.e., those with aggregate capacities greater than 225 Mg/day [250 tons/day] but equal to or less than 800 Mg/day [880 tons/day] of MSW) would incur no increased costs over baseline since they are not required to install NO<sub>x</sub> controls. These large plants would be required to install NO<sub>x</sub> controls under Regulatory Alternatives 2 and 3, and increased cost ranges from \$2.40 to \$3.60/Mg (\$2.20 to \$3.30/ton) of MSW.

Small MWC plants (i.e., those with aggregate capacities equal to or less than 225 Mg/day [250 tons/day] of MSW) would incur no increased costs (over baseline) under Regulatory Alternatives 1 or 2. Under Regulatory Alternative 3, small plants would be required to control NO<sub>x</sub> emissions, and increased annualized cost per unit of MSW combusted would be significantly higher than for large plants, ranging from \$7.40 to \$20.10/Mg (\$6.70 to \$18.30/ton) of MSW.

**National Impacts of the Regulatory Alternatives for NO<sub>x</sub> Control:** The national annual NO<sub>x</sub> emissions (and the emission reductions relative to baseline emissions) from MWC plants under the baseline and each of the regulatory alternatives are shown in Table 16. As shown in the table, national baseline NO<sub>x</sub> emissions from MWC plants are 29,000 Mg/year (32,000 tons/year).

Under the three regulatory alternatives, national emissions would be reduced by 37 to 45 percent, and national emissions would range from 19,000 Mg/year (21,000 tons/year) under Alternative 1 to 16,000 Mg/year (18,000 tons/year) under Alternative 3. The table shows that by controlling the large plants (under Alternative 1 or 2) most of the achievable emission reduction is

realized, and control of small plants under Alternative 3 would result in little additional emission reduction.

TABLE 16.—NATIONAL NO<sub>x</sub> EMISSIONS UNDER BASELINE AND THE REGULATORY ALTERNATIVES FOR NO<sub>x</sub> CONTROL

	NO <sub>x</sub> emissions (Mg/year)	Percent reduction relative to baseline emissions
Baseline.....	29,000	0
1.....	19,000	37
2.....	17,000	42
3.....	16,000	45

Table 17 shows the national total increased capital costs (relative to baseline), increased total annualized cost, total increased annualized cost per unit of MSW combusted and incremental cost effectiveness (cost per Mg of NO<sub>x</sub> emission reduction) for each of the regulatory alternatives. National costs given in this table are for new MWC plants that will be operating or under construction by the end of the fifth year of implementation of the NSPS. As shown in Table 17, national increased capital cost ranges from \$77 million under Regulatory Alternative 1 to \$123 million under Regulatory Alternative 3. Total increased annualized cost ranges from \$24 million under Regulatory Alternative 1 to \$37 million under Regulatory Alternative 3. Average increased annualized cost per unit of MSW combusted (relative to baseline) ranges from \$1.60/Mg (\$1.50/ton) for Regulatory Alternative 1 to \$2.50/Mg (\$2.30/ton) for Regulatory Alternative 3. The incremental cost effectiveness (incremental cost per Mg of NO<sub>x</sub> emission reduction relative to the next less stringent regulatory alternative) ranges from \$2,200/Mg (\$2,000/ton) NO<sub>x</sub> for Regulatory Alternative 1, to \$3,400/Mg (\$3,100/ton) NO<sub>x</sub> for Regulatory Alternative 2, up to \$9,200/Mg (\$8,400/ton) for Regulatory Alternative 3.

TABLE 17.—NATIONAL NO<sub>x</sub> CONTROL COSTS UNDER THE REGULATORY ALTERNATIVES FOR NO<sub>x</sub> CONTROL

Regulatory alternative	Total capital cost (\$10 <sup>6</sup> /yr)	Total annualized cost (\$10 <sup>6</sup> /yr)	Total annualized cost per Mg MSW (\$/Mg)	Incremental cost effectiveness (\$/ton of NO <sub>x</sub> )
1	77	24	1.60	2,200
2	97	30	2.00	3,400
3	123	37	2.50	9,200

**Regulatory Alternative Selected:** Regulatory Alternative 2 was selected for the proposed standard for NO<sub>x</sub> and represents best demonstrated technology for MWC units at large MWC plants considering cost, nonair quality health and environmental impacts, and energy requirements. The proposed standards can be complied with through the use of any technology (e.g., post-combustion controls such as SNCR, SCR, or natural gas reburning, or by combustion modifications such as staged combustion, low excess air, flue gas recirculation, etc.).

The NO<sub>x</sub> control technology that served as the basis for Regulatory Alternative 2 (i.e., SNCR by ammonia injection) is demonstrated on three MWC's in the U.S., and both SNCR and SCR technologies are demonstrated on additional MWC's in Japan and Europe, and no severe cost, economic, or energy impacts are expected to result from its application.

Relative to the regulatory baseline, NO<sub>x</sub> standards based on Regulatory Alternative 2 would achieve about a 42 percent reduction in NO<sub>x</sub> emissions from MWC's on a national basis. About 90 percent of new MWC's would be covered. The increase in MSW disposal cost (relative to baseline) would be about \$2.00/Mg (\$1.80/ton) of MSW processed, which is low relative to typical baseline disposal costs of \$40/Mg (\$36/ton) to over \$100/Mg (\$90/ton) of MSW.

While additional NO<sub>x</sub> reductions would be achieved by applying the standard to all MWC's (Regulatory Alternative 3), these reductions would



be small, and the cost impacts would be unreasonably high for MWC's located at small MWC plants. Application of NO<sub>x</sub> controls to small MWC's would achieve an additional 3 percent reduction in national NO<sub>x</sub> emissions relative to Alternative 2. Cost impacts are about 4 to 5 times higher for small MWC's than for large MWC's. At an individual MWC level, the cost effectiveness of NO<sub>x</sub> control of such a standard would be about \$10,500/Mg (\$9,500/ton) of NO<sub>x</sub> removed for a typical small MWC plant, compared to a cost effectiveness of about \$2,200/Mg (\$2,000/ton) of NO<sub>x</sub> removed for a typical large MWC plant. The increase in disposal costs for a typical small plant would be about \$8.20/Mg (\$7.40/ton) compared to less than \$2.00/Mg (\$1.80/ton) for a typical large MWC. Considering the cost impacts and relatively small potential emissions reduction, control of NO<sub>x</sub> emissions from MWC's with capacities equal to or less than 225 Mg/day (250 tons/day) is not considered reasonable.

It has been contended that SNCR technology for NO<sub>x</sub> control should not serve as the basis for the standard because it is more expensive than NO<sub>x</sub> controls imposed in other industries. Such inter-industry comparisons cannot control this decision. The existence of less expensive or more expensive controls in other categories does not govern the decisions in this category. *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 389 (D.C. Cir. 1973), cert. denied, 417 U.S. 921 (1974); and cf. *American Meat Inst. v. EPA*, 528 F.2d 442, 466 (7th Cir. 1975). The EPA must review the statutory factors and arrive at an independent conclusion on whether to base NO<sub>x</sub> standards on SNCR or any other technology on a category-by-category basis.

The EPA also solicits comment on the applicability of other types of NO<sub>x</sub> emission control technologies to MWC's, including flue gas recirculation, natural gas reburn, and SCR. Comments in this area should address the performance capabilities of these technologies (i.e., the emission levels that can be achieved) and the costs associated with their use.

#### C. Performance Testing and Monitoring Requirements for NO<sub>x</sub>

The proposed standards would require continuous monitoring of NO<sub>x</sub> emissions using a continuous emission monitor (CEMS) for all MWC's with capacities greater than 225 Mg/day (250 tons/day) of MSW. An initial compliance test for NO<sub>x</sub> would be required during the first 24 consecutive unit operating hours at full load. Compliance with the emission limit

would be determined using a block 24-hour average as measured by the CEMS. All valid data must be used in calculating emission rates, even if the minimum CEMS data requirement is met. Calculations to determine compliance would be made using Method 19.

The CEMS for NO<sub>x</sub> are subject to the same minimum data collection requirements as described for other CEMS in Section IV.H. The minimum CEMS data requirement would be 75 percent of the hours per day and 75 percent of the days per month the unit is operated. Quality assurance would be maintained in accordance with Appendix F.

#### D. Reporting and Recordkeeping for NO<sub>x</sub>

As described under "Rationale for the Standards for MWC Emissions" (Section IV.I.), the proposed standards would require that the Administrator be notified of the initial MWC unit startup for all affected facilities located within large MWC plants and of the planned date for initial compliance testing. Following the initial compliance tests for NO<sub>x</sub>, a report would be submitted summarizing the compliance test results and the performance evaluation of the CEMS.

After the initial compliance test has been completed, the proposed standards would require that quarterly compliance reports for NO<sub>x</sub> be submitted for all affected facilities located within large MWC plants. The quarterly report would need to include, as applicable, for the period covered by the report: (1) any period where emissions exceeded the applicable standard; (2) results of all annual performance tests; (3) all 24-hour average NO<sub>x</sub> emission rates calculated during the period; and (4) identification of any periods for which data were excluded from these calculations. In addition, each quarterly report for NO<sub>x</sub> would include the results of the daily CEMS drift tests and quarterly accuracy determinations as required under Appendix F, Procedure 1.

If the minimum amount of NO<sub>x</sub> data was not obtained for a 24-hour averaging period, reasons for failure to obtain sufficient data and a description of corrective action taken would also be included, along with all information needed to calculate the 24-hour average values according to Method 19. Any failure to obtain the minimum amount of data for CEMS (75 percent of operating hours per day and 75 percent of operating days per month) must be reported in the quarterly reports along with reasons.

The proposed standards would also require that certain types of records be maintained. Records to be maintained include all data outputs of the CEMS; all quarterly reports submitted under this rulemaking; and all records required under Appendix F, Procedure 1. All required records would be maintained for 2 years following the date of such records, after which they could be discarded.

The reporting and recordkeeping requirements in the proposed NO<sub>x</sub> standards are necessary to provide enforcement personnel with the data and information necessary to ensure that existing MWC's achieve continued compliance with the NO<sub>x</sub> standards. At the same time, these requirements would not impose an unreasonable burden on MWC owners or operators.

#### VII. Combined Impacts of the Proposed Standards

The impacts of the proposed municipal waste combustor (MWC) emissions standard (based on good combustion practices [GCP] and acid gas/particulate matter [PM] control systems), the proposed materials separation standard, and the proposed nitrogen oxide (NO<sub>x</sub>) emission standard are additive. The combined national emission impacts for these types of standards are summarized in Table 18.

As shown in Table 18, the combined national total annualized cost for the three proposed standards would be about \$190 million/year, and the combined annualized cost per unit of municipal solid waste [MSW] combusted would be \$12.90/Mg (\$11.70/ton) of MSW combined.

TABLE 18.—COMBINED NATIONAL EMISSION REDUCTIONS FOR THE SELECTED REGULATORY ALTERNATIVES

Pollutant (regulatory alternative selected)	Annual total emission reduction
MWC emissions (regulatory alternative IV):	
MWC organics:	15 kg/year
Dioxins/Furans	
MWC metals:	6,000 Mg/year
Particulate matter	
MWC acid gases:	
Sulfur dioxide	36,000 Mg/year
Hydrogen chloride	47,000 Mg/year
Materials separation	Additional reductions in MWC emissions
Nitrogen oxide (NO <sub>x</sub> ) (regulatory alternative 2):	12,000 Mg/year



TABLE 19.—COMBINED NATIONAL CONTROL COSTS FOR THE SELECTED REGULATORY ALTERNATIVES

Standard (regulatory alternative selected)	Total annualized cost (\$10 <sup>6</sup> /yr)	Annualized cost per Mg MSW (\$/Mg)
MWC emissions (regulatory alternative IV) .....	160	10.90
Materials separation.....	0	0
NO <sub>x</sub> (regulatory alternative 2) .....	30	2.00
Combined total.....	190	12.90

The standards for materials separation and NO<sub>x</sub> would add to the economic impacts on households and government units discussed for the MWC emission standards in section IV.F. However, as discussed in section V, the materials separation standards could result in net benefits (reduced costs) for waste disposal for some households and government units. Although households in some communities could incur disposal costs increase of over \$100/year for the combination of the three standards, no severe economic impacts are anticipated.

#### VIII. Miscellaneous

##### A. Prevention of Significant Deterioration Considerations

Today's rulemaking under section 111(b) would establish a new classification of pollutants subject to regulation under the Act: "Municipal waste combustor (MWC) emissions." The components of MWC emissions are MWC metals, MWC organics, and MWC acid gases. A consequence of this action is that prevention of significant deterioration (PSD) rules will now apply to all subject major stationary sources that have significant increases in this pollutant. Absent any significance levels in the regulations to exempt *de minimis* emission increases, PSD review would be triggered by any increase in MWC emissions (see, e.g., 40 CFR 52.21(b)(23)(ii)).

In order to maintain a manageable review process which focuses resources on environmental priorities, EPA is proposing in today's notice significance thresholds for these pollutants in a manner similar to those promulgated on August 7, 1980, for other regulated pollutants. At that time, EPA established emissions thresholds, expressed in tons per year, below which emissions would be considered *de minimis* and not be made subject to review. The Agency established these thresholds for 15 pollutants—the six criteria pollutants

plus the four pollutants addressed at that time by national emission standards for hazardous air pollutants (NESHAP) and the five addressed by the new source performance standards (NSPS) (see, e.g., 40 CFR 52.21(b)(23)(i)).

The current significance levels were established in 1980 as simple indicators of what emission levels could appropriately be considered *de minimis*. These emission levels have proven to be reasonable in implementing the PSD program. For noncriteria pollutants, the significance numbers were based on a percentage of the emissions of a well-controlled facility of modest size. For NESHAP pollutants, this level was 10 percent of allowable emissions from the subject facility; for NSPS, it was 20 percent. Projected impacts from emissions at this rate were compared to available health and welfare data to assure avoiding appreciable adverse effects.

For the purpose of establishing what amount of MWC emissions would be significant, a 225 Mg/day (250 tons/day) capacity MWC plant was evaluated. This capacity level was chosen since it is typical of many of the moderately sized MWC plants and represents that threshold capacity where a 90 Mg/year (100 tons/year) emission rate would qualify an MWC plant as being major under PSD. An MWC of this size typically would have the potential after controls to emit 90 Mg/year (100 tons/year) of MWC emissions. Because MWC emissions have carcinogenic components, EPA believes that a significance threshold of no higher than 10 percent of that emission rate is appropriate. Thus, the Agency proposes a significance emission level of 9 Mg/year (10 tons/year) of MWC emissions as a trigger for PSD review.

The August 1980 Federal Register also provided exemptions from the otherwise required PSD air quality monitoring data analyses for these sources which could demonstrate that their maximum expected air quality impact could be less than the values indicated in, e.g., 40 CFR 52.21(i)(B)(i) (45 FR 52676, 52709). Those air quality values were generally set at levels reflecting five times the lowest detectable ambient concentrations that could be measured by available monitoring equipment. The MWC emissions being regulated today present a somewhat different situation in that no ambient monitoring methods exist to measure these MWC-specific classifications of pollutants. For this reason, the Administrator will not at this time require PSD permit applicants to monitor specifically for MWC emissions. Applicants for MWC permits will, of

course, continue to be responsible for performing appropriate monitoring for other regulated pollutants.

The EPA recognizes that the determination of significance thresholds for review of increases in MWC emissions is important. Comment on the proposed threshold and the approach to defining it is therefore solicited and will be carefully reviewed.

##### B. Permitting Operational Guidance

On June 26, 1987, the EPA's Office of Air Quality Planning and Standards issued operational guidance for use by State and local agencies with PSD or nonattainment area new source review (NSR) permitting authority. The operational guidance was intended to be followed by State and local agencies in reviewing best available control technology determinations in PSD permits and lowest achievable emission rate determinations under NSR. These programs apply to MWC plants larger than 225 Mg/day (250 tons/day) capacity.

Today's proposal also would establish NO<sub>x</sub> standards for large MWC plants and require materials separation, which were not included in the 1987 operational guidance. The NSPS would thus set more stringent emission control requirements for new MWC's than was urged under the 1987 operational guidance, and future permitting decisions under PSD and NSR programs must comply with this NSPS, if EPA adopts it as a final rule.

#### IX. Administrative Requirements

##### A. Public Hearing

Three public hearings are planned. Each will discuss the proposed standards in accordance with section 307(d)(5) of the Clean Air Act (CAA). Persons wishing to make oral presentations should contact EPA at the address given in the ADDRESSES section of this preamble. Oral presentations should be limited to 15 minutes each. Any member of the public may file a written statement before, during, or within 30 days after the hearing. Written statements should be mailed to the Air Docket Section at the address given in the ADDRESSES section of this preamble.

A verbatim transcript of the hearings and written statements will be available for public inspection and copying during normal working hours at the EPA's Air Docket Section in Washington, DC (see ADDRESSES section of this preamble).

##### B. Docket

The docket is an organized and complete file of all the information submitted to or otherwise considered in



the development of this proposed rulemaking. The principal purposes of the docket are: (1) To allow interested parties to identify and locate documents so that they can effectively participate in the rulemaking process, and (2) to serve as the record in case of judicial review (except for interagency review materials (section 307(d)(7)(A))). The docket number for this rulemaking is A-89-08.

#### C. Clean Air Act Procedural Requirements

1. *Administrator Listing—Section 111.* As prescribed by section 111 of the CAA, as amended, establishment of standards of performance for municipal waste combustors (MWC's) is based on the Administrator's determination (52 FR 25399, dated July 7, 1987) that these sources contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare.

2. *Periodic Review—Section 111.* The regulation will be reviewed 4 years from the date of promulgation as required by the CAA. This review will include an assessment of such factors as the need for integration with other programs, the existence of alternative methods, enforceability, improvements in emission control technology, and reporting requirements.

3. *External Participation—Section 117.* In accordance with section 117 of the CAA, publication of this proposal was preceded by consultation with appropriate advisory committees, independent experts, and Federal departments and agencies. The Administrator will welcome comments on all aspects of the proposed regulation, including economic and technological issues.

4. *Economic Impact Assessment—Section 317.* Section 317 of the CAA requires the Administrator to prepare an economic impact assessment for any new source performance standard (NSPS) promulgated under section 111(b) of the Act. An economic impact assessment was prepared for the proposed standards and for other regulatory alternatives. All aspects of the assessment were considered in the formulation of the proposed standards to ensure that the proposed standards would represent the best system of emission reduction considering costs. Portions of the economic impact assessment are included in the background information documents and additional information is included in the docket.

#### D. Office of Management and Budget Reviews

1. *Paperwork Reduction Act.* The information collection requirements in this proposed rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.* Comments on these requirements should be submitted to the Office of Information and Regulatory Affairs, OMB, 726 Jackson Place NW, Washington, DC 20503, marked "Attention: Desk Officer for EPA." Copies of these comments should also be submitted to Air Docket Section (LE-131), Attention: Docket No. A-89-08, U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460. The final rule will reflect consideration of any comments on the information collection requirements.

The average annual burden of the reporting and recordkeeping requirements associated with the proposed regulation during the first 3 years of the NSPS would be 65 person-years, based on an average of 26 respondents per year.

2. *Executive Order 12291 Review.* This regulation was submitted to the OMB for review as required by Executive Order 12291. Any written comments from OMB and any responses to those comments will be included in Docket No. A-89-08. This docket is available for public inspection at the EPA's Air Docket Section, which is listed under the ADDRESSES section of this notice.

#### E. Regulatory Flexibility Act Compliance

The Regulatory Flexibility Act (RFA) (Public Law 96-354, September 19, 1980), requires consideration of the impacts of proposed regulations on small entities including small businesses, organizations, and jurisdictions. As described in section IV.F., no households or local governments would experience severe economic impacts as a result of the proposed NSPS. The RFA, however, requires a broader look into whether there will be significant adverse economic effects and, if so, how those impacts will be distributed among small entities. The major purpose of the RFA is to keep paperwork and regulatory requirements from getting out of proportion to the scale of the entities being regulated, without compromising the objectives of, in this case, the CAA. Another purpose is to involve the small entities in the regulatory development process.

The RFA specifies that a regulatory flexibility analysis must be prepared if a proposed regulation will have: (1) A

significant economic impact on (2) a substantial number of small entities. For the RFA, the question is whether impacts are significant—not severe. One criterion that EPA has used specifies that economic impacts are significant whenever compliance costs will increase production costs by more than 5 percent. As a result of the proposed standards, the combustion costs per Mg of municipal solid waste (MSW), as well as tipping fees, may increase by more than 5 percent.

Will these significant economic impacts be felt by a substantial number of small entities? For NSPS regulations, EPA often has applied a 20 percent rule; if more than 20 percent of small entities are significantly impacted, the specific concerns of the RFA must be addressed. Unfortunately, it is rarely clear what the 20 percent should be of. In this case it could be 20 percent of the small entities with MWC's—but almost by definition 100 percent of those entities will be significantly impacted—or 20 percent of small entities in the "industry." Regardless of how the criterion is viewed, EPA finds only a few small businesses and only a handful of small governments that will own or operate MWC's.

The EPA has taken appropriate steps to involve small entities in the regulatory development process, and to mitigate potential adverse effects for small entities. In the spring of both 1988 and 1989 EPA presented status reports on the standards at a public meeting of the National Air Pollution Control Techniques Advisory Committee (NAPCTAC). The function of NAPCTAC is to serve as a forum for involving industry and the public in the regulatory development process for air pollution emission controls. Owners of all existing MWC's, all firms involved in owning or operating MWC's, and a wide selection of public interest groups were invited to attend and participate in the NAPCTAC meeting. In the autumn of 1988 EPA mailed a package of about a dozen documents covering most aspects of development of the standards. The mailing went to substantially the same parties—over 300 in total. Recipients were invited to comment on all aspects of the development of the standards.

In compliance with the RFA, measures to mitigate effects on small entities were also considered. Small entities that own or operate MWC's most likely will have small modular MWC's. For that reason the mitigation measures discussed in this section focus on small MWC's as surrogates for small entities. There are several ways potentially significant adverse economic impacts on small



entities will be mitigated. First, the standards contain mitigation measures. Several of the requirements are less restrictive for smaller MWC's. To the extent the proportion of small-entity owners and operators of small MWC's exceeds the proportion of small-entity owners and operators of large MWC's, the proposal provision for small MWC's translates into an easing of the economic burden on small entities relative to large entities.

Second, there are several things small governments can do in the face of steep compliance costs. In almost all cases these governments have available to them an alternative waste disposal technology—landfilling—and many ways to expand source reduction, materials separation, and recycling programs. Small governments have the opportunity to join in, or join in forming, intergovernmental service districts, or to contract with neighboring waste disposal operations for disposal services. Whenever intergovernmental agreements lead to the construction of MWC's of larger capacity than otherwise would have been constructed, air pollution control costs per Mg of MSW will shrink. Governments also can exercise monopoly market power to restrict competition among landfills and MWC's to improve the financial viability of particular MWC's. Finally, small governments that want to combust MSW have the option of building and operating MWC's as public ventures, or arranging for the MWC's to be built and operated as private ventures. The small governments can investigate both financial markets and then select whichever approach offers the best terms.

#### F. List of Subjects in 40 CFR Parts 51, 52 and 60

Air pollution control, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping, Municipal waste combustors, Municipal solid waste.

Dated: November 30, 1989.

William K. Reilly,  
Administrator.

For the reasons set forth in the preamble, it is proposed that part 51, 52, and 60, chapter I, title 40 of the Code of Federal Regulations, be amended as follows:

#### PART 51—REQUIREMENTS FOR PREPARATION, ADOPTION, AND SUBMITTAL OF IMPLEMENTATION PLANS

1. The authority citation for part 51 continues to read as follows:

Authority: Secs. 101(b)(1), 110, 160-169, 171-178, and 301(a) of the Clean Air Act; 42 U.S.C. 7401(b)(1), 7410, 7470-7479, 7501-7508, and 7601(a).

#### § 51.166 [Amended]

2. In § 51.166 paragraph (b)(23)(i) the "Pollutant and Emission Rate" is amended by adding an entry to the end to read as follows:

Municipal waste combustor emissions:  
10 tpy

#### PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

3. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401-7462.

#### § 52.21 [Amended]

4. In § 52.21, paragraph (b)(23)(i) the "Pollutant and Emission Rate" is amended by adding an entry to the end to read as follows:

Municipal waste combustor emissions:  
10 tpy

#### PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

5. The authority citation for part 60 continues to read as follows:

Authority: 42 U.S.C. 7401, 7411, 7414, 7416 and 7601.

6. Part 60 is amended by adding a Subpart Ea, consisting of §§ 60.50a through 60.59a, as follows:

#### Subpart Ea—Standards of Performance for Municipal Waste Combustors

Sec.

60.50a Applicability and delegation of authority.

60.51a Definitions.

60.52a Standard for MWC metals.

60.53a Standard for MWC organics.

60.54a Standard for MWC acid gases.

60.55a Standard for nitrogen oxides.

60.56a Standard for MWC operating practices.

60.57a MWC operator certification and training.

60.58a Compliance and performance testing.

60.59a Reporting and recordkeeping requirements.

#### Subpart Ea—Standards of Performance for Municipal Waste Combustors

§ 60.50a Applicability and delegation of authority.

(a) The affected facility to which this subpart applies is each municipal waste combustor (MWC) unit for which construction, modification, or reconstruction is commenced after December 20, 1989.

(b) Physical or operational changes made to an existing MWC unit to comply with emission guidelines under Subpart Ca are not considered a modification or reconstruction and do not bring an existing MWC unit under this subpart.

(c) The following authorities shall be retained by the Administrator and not transferred to a State.

§ 60.56a(h)

#### § 60.51a Definitions.

"ASME" means the American Society of Mechanical Engineers.

"Bubbling fluidized bed combustor" means a fluidized bed combustor in which the majority of the bed material remains in the primary combustion zone.

"Chief facility operator" means the person in direct charge and control of the operation of an MWC and who is responsible for daily on-site supervision, technical direction, management, and overall performance of the facility.

"Circulating fluidized bed combustor" means a fluidized bed combustor in which the majority of the bed material is carried out of the primary combustion zone and is transported back to the primary zone through a recirculation loop.

"Coal/RDF co-fired combustor" means a combustor that is designed to fire coal and refuse-derived fuel (RDF) simultaneously.

"Continuous emission monitoring system" or "CEMS" means a monitoring system for continuously measuring the emissions of a pollutant from an affected facility.

"Dioxin/furan" means total tetra-through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

"Ferrous metals" means metals and alloys containing iron. Ferrous metals include, but are not limited to, pieces of scrap metal and household appliances made of iron-containing metals, including stoves, refrigerators, air conditioners, and other appliances. Ferrous metals do not include whole automobiles or other vehicles or vehicle bodies.

"Four-hour block average" or "4-hour block average" means the average of all hourly emission rates when the affected facility is operating and combusting MSW measured over 4-hour periods of from 12:00 midnight to 4 a.m., 4 a.m. to 8 a.m., 8 a.m. to 12:00 noon, 12:00 noon to 4 p.m., 4 p.m. to 8 p.m., and 8 p.m. to 12:00 midnight.

"Large MWC plant" means an MWC plant with an MWC plant capacity greater than 225 megagrams per day (250 tons per day) of municipal-type solid waste (MSW).



"Mass burn refractory MWC" means a combustor that combusts MSW in a refractory wall furnace.

"Mass burn rotary waterwall MWC" means a combustor that combusts MSW in a cylindrical rotary waterwall furnace.

"Mass burn waterwall MWC" means a combustor that combusts MSW in a conventional waterwall furnace.

"Maximum MWC unit load" means the maximum 1-hour MWC unit load achieved during the initial compliance test or during any subsequent test demonstrating compliance at a higher unit load.

"Modular excess air MWC" means a combustor that combusts MSW and that is not field-erected and has multiple combustion chambers, all of which are designed to operate at conditions with combustion air amounts in excess of theoretical air requirements.

"Modular starved air MWC" means a combustor that combusts MSW and that is not field-erected and has multiple combustion chambers in which the primary combustion chamber is designed to operate at substoichiometric conditions.

"Municipal waste combustor" or "MWC" or "MWC unit" means any device that combusts MSW including, but not limited to, field-erected incinerators (with or without heat recovery), modular incinerators (starved air or excess air), boilers (i.e., steam generating units), and furnaces (whether suspension-fired, grate-fired, mass-fired, or fluidized bed-fired).

"Municipal-type solid waste" or "MSW" means refuse, more than 50 percent of which is waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible materials such as metal, glass, and rock. RDF is considered to be MSW. Construction/demolition waste is not considered to be MSW.

"MWC acid gases" means sulfur dioxide and hydrogen chloride gases emitted from MWC units.

"MWC metals" means condensable metals associated with particulate matter emissions from MWC units.

"MWC organics" means organic compounds emitted from MWC units and includes total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

"MWC plant" means one or more MWC units at the same location for which construction, modification, or reconstruction is commenced after December 20, 1989.

"MWC plant capacity" means the aggregate MWC unit capacity of all MWC units at an MWC plant. MWC

units for which construction, modification, or reconstruction is commenced before December 20, 1989 are not included for determining applicability under this subpart.

"MWC unit capacity" means the maximum design charging rate of an MWC unit expressed in megagrams per day (tons per day) of MSW combusted.

"MWC unit load" means volume of steam produced expressed in kilograms per hour (pounds per hour) of steam.

"Particulate matter" means total particulate matter emitted from MWC units as measured by Method 5 (see § 60.58a).

"Potential hydrogen chloride emission rate" means the hydrogen chloride emission rate that would occur from combustion of MSW in the absence of any hydrogen chloride emissions control.

"Potential sulfur dioxide emission rate" means the sulfur dioxide emission rate that would occur from combustion of MSW in the absence of any sulfur dioxide emissions control.

"Processed MSW or RDF" means MSW or RDF that has been processed to separate materials for recovery prior to combustion in an MWC unit. MSW or RDF is considered to be processed MSW or RDF if an overall 25 percent or greater reduction by weight (annual average) of MSW is achieved through separation for recovery of some or all of the following recoverable materials:

Paper and paperboard combined;  
Ferrous metals;  
Nonferrous metals;  
Glass;  
Plastics;  
Household batteries; and  
Yard waste.

A maximum of 10 percent reduction (by weight) of the overall MSW shall be attributed to separation of yard waste. The 25 percent or greater overall reduction requirement may be achieved by on-site mechanical separation, on-site manual separation, off-site mechanical separation, off-site manual separation, or a curbside source reduction or materials separation (recycling) program, or a combination thereof.

"Recoverable materials" means paper and paperboard combined; ferrous metals; nonferrous metals; glass; plastics; household batteries; and yard waste.

"Refuse-derived fuel" or "RDF" means a type of MSW produced by processing MSW through shredding and size classification. This includes all classes of RDF including low density fluff RDF through densified RDF fuel pellets.

"Refuse-derived fuel spreader stoker" means a steam generating unit that

combusts RDF in a semi-suspension firing mode using air-fed distributors.

"Same location" means the same or contiguous property that is under common ownership or control, including properties that are separated only by a street, road, highway, or other public right-of-way. Common ownership or control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, subdivision, or any combination thereof, including any municipality or other governmental unit, or any quasi-governmental authority (e.g., a public utility district or regional waste disposal authority).

"Shift supervisor" means the person in direct charge and control of the operation of an MWC and who is responsible for on-site supervision, technical direction, management, and overall performance of the facility during an assigned shift.

"Small MWC plant" means an MWC plant with an MWC plant capacity of 225 megagrams per day (250 tons per day) or less of MSW.

"Twenty-four hour daily average" or "24-hour daily average" means the average of all hourly emission rates when the affected facility is operating and firing MSW measured over a 24-hour period between 12:00 midnight and the following midnight.

"Unprocessed MSW or RDF" means MSW or RDF that has not been processed to separate materials for recovery prior to combustion or for which less than a 25 percent reduction by weight (annual average) of MSW is achieved as specified under "processed MSW or RDF."

"Vehicle batteries" means any wet lead-acid battery weighing more than 5 kilograms (11 pounds) that is manufactured for use in motor vehicles, vessels, or aircraft, or for any other (nonvehicular) use.

"Yard waste" means vegetative matter removed as a result of outdoor maintenance practices from residential and commercial yards, municipal parks, gardens, golf courses, and other similar areas, and includes, but is not limited to, grass trimmings, tree branches, straw, and leaves.

#### § 60.52a Standard for MWC metals.

(a) On and after the date on which the initial compliance test is completed or is required to be completed under § 60.8, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of 34 milligrams per dry standard cubic meter



(0.015 grains per dry standard cubic foot), corrected to 7 percent oxygen (dry basis).

(b) On and after the date on which the initial compliance test is completed or is required to be completed under § 60.8, no owner or operator of an affected facility subject to the particulate matter emission limit under paragraph (a) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 10 percent opacity (6-minute average).

#### § 60.53a Standard for MWC organics.

(a) On and after the date on which the initial compliance test is completed or is required to be completed under § 60.8, no owner or operator of an affected facility located within a small MWC plant shall cause to be discharged into the atmosphere from that affected facility any gases that contain dioxin/furan emissions that exceed 75 nanograms per normal cubic meter (30 grains per billion standard cubic feet), corrected to 7 percent oxygen (dry basis), except as provided under paragraph (b) of this section.

(b) On and after the date on which the initial compliance test is completed or is required to be completed under § 60.8, no owner or operator of an affected facility combusting RDF and located within a small MWC plant shall cause to be discharged into the atmosphere from that affected facility any gases that contain dioxin/furan emissions that exceed 250 nanograms per normal cubic meter (100 grains per billion standard cubic feet), corrected to 7 percent oxygen (dry basis).

(c) On and after the date on which the initial compliance test is completed or is required to be completed under § 60.8, no owner or operator of an affected facility located within a large MWC plant shall cause to be discharged into the atmosphere from that affected facility any gases that contain dioxin/furan emissions that exceed (5 to 30) nanograms per normal cubic meter ([2 to 12] grains per billion standard cubic feet), corrected to 7 percent oxygen (dry basis).

#### § 60.54a Standard for MWC acid gases.

(a) On and after the date on which the initial compliance test is completed or is required to be completed under § 60.8, no owner or operator of an affected facility located within a small MWC plant shall cause to be discharged into the atmosphere from that affected facility any gases that contain sulfur dioxide in excess of 50 percent of the potential sulfur dioxide emission rate (50 percent reduction by weight or

volume) or 30 parts per million by volume, corrected to 7 percent oxygen (dry basis), whichever is less stringent.

(b) On and after the date on which the initial compliance test is completed or is required to be completed under § 60.8, no owner or operator of an affected facility located within a small MWC plant shall cause to be discharged into the atmosphere from that affected facility any gases that contain hydrogen chloride in excess of 20 percent of the potential hydrogen chloride emission rate (80 percent reduction by weight or volume) or 25 parts per million by volume, corrected to 7 percent oxygen (dry basis), whichever is less stringent.

(c) On and after the date on which the initial compliance test is completed or is required to be completed under § 60.8, no owner or operator of an affected facility located within a large MWC plant shall cause to be discharged into the atmosphere from that affected facility any gases that contain sulfur dioxide in excess of 15 percent of the potential sulfur dioxide emission rate (85 percent reduction by weight or volume) or 30 parts per million by volume, corrected to 7 percent oxygen (dry basis), whichever is less stringent.

(d) On and after the date on which the initial compliance test is completed or is required to be completed under § 60.8, no owner or operator of an affected facility located within a large MWC plant shall cause to be discharged into the atmosphere from that affected facility any gases that contain hydrogen chloride in excess of 5 percent of the potential hydrogen chloride emission rate (95 percent reduction by weight or volume) or 25 parts per million by volume, corrected to 7 percent oxygen (dry basis), whichever is less stringent.

#### § 60.55a Standard for nitrogen oxides.

On and after the date on which the initial compliance test is completed or is required to be completed under § 60.8, no owner or operator of an affected facility located within a large MWC plant shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides in excess of (120 to 200) parts per million by volume, corrected to 7 percent oxygen (dry basis).

#### § 60.56a Standards for MWC operating practices.

(a) On and after the date on which the initial compliance test is completed or is required to be completed under § 60.8, no owner or operator of an affected facility shall cause such facility to exceed the carbon monoxide standards shown in Table 1.

TABLE 1.—MWC OPERATING STANDARDS

MWC technology	Carbon monoxide emission limit (parts per million by volume)*
Mass burn waterwall.....	100
Mass burn refractory.....	100
Mass burn rotary waterwall.....	150
Modular starved air.....	50
Modular excess air.....	50
Refuse derived fuel spreader stoker.....	150
Bubbling fluidized bed combustor.....	100
Circulating fluidized bed combustor.....	100
Coal/RDF co-fired combustors.....	150
Other Technologies.....	150

\* Measured at the combustor outlet in conjunction with a measurement of oxygen concentration, corrected to 7 percent oxygen (dry basis), using a 4-hour block average.

(b) No owner or operator of an affected facility that generates steam shall cause such facility to operate at a load level greater than 100 percent of the maximum MWC unit load. Any owner or operator of an affected facility who wishes to operate at a load level greater than the maximum MWC unit load may do so by conducting a repeat test to establish a higher maximum MWC unit load.

(c) No owner or operator of an affected facility shall cause such facility to operate at a temperature exceeding 230°C (450°F) measured at the particulate matter control device inlet.

(d) Except as provided under paragraphs (g) and (h) of this section, on and after the date of initial start-up, no owner or operator of an affected facility shall cause unprocessed MWC or RDF to be combusted in such facility.

(e) Except as provided under paragraph (g) of this section, on and after the date of initial start-up, no owner or operator of an affected facility shall cause vehicle batteries to be combusted in such facility.

(f) Except as provided under paragraph (g) of this section, on and after the date of initial start-up, a program to remove household batteries from MWC prior to combustion shall be established.

(g) The owner or operator of an affected facility that commenced construction, modification, or reconstruction after December 20, 1989, but before (date of promulgation), shall meet the requirements of paragraphs (d), (e), and (f) of this section on and after December 31, 1992, or on and after the date of initial start-up, whichever is later.

(h)(i) The owner or operator of an affected facility may apply to the Administrator for a materials



separation/combustion permit for any combustible material designated for separation under the materials separation plan under § 60.59a(d) for which a market is unavailable for the separated material for 120 days. A market is considered to be unavailable for such combustibles if the Administrator determines that: the cost of recycling such combustibles exceeds the cost of landfilling them, and that the 25 percent reduction in the weight of MWC or RDF contained in the definition of "processed MSW or RDF" cannot be obtained through separation of other recoverable materials. An owner or operator wishing to demonstrate that a recycling market is unavailable for recoverable combustibles must submit a demonstration to the Administrator that includes: a list of recycling facilities and facility officials contacted, a written discussion of why he was not able to obtain recycling for the combustible wastes, and/or a list of landfill facilities and facility individuals contacted and a documented comparison of the costs of recycling versus the costs of landfilling. The MWC owner or operator must also provide to the Administrator the following certification:

I certify under penalty of law that a recycling market is unavailable for the following combustible recoverables as defined in 40 CFR 60.51a. I believe that the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

(2) If a materials separation/combustion permit has been issued, separated material(s) covered under the materials separation/combustion permit may be combusted in the affected facility and are credited toward the overall 25 percent materials separation requirement under the definition of "processed MSW or RDF" under § 60.51a.

(3) If a materials separation/combustion permit is granted by the Administrator, it shall be valid for a maximum of 1 year. Reapplication may be made for subsequent materials separation/combustion permits within 60 days before expiration of such a permit and may be renewed for 1 year.

#### § 60.57a MWC operator certification and training.

(a) Within 24 months from the date that ASME adopts a certification program for MWC unit (resource recovery facility) operators, each chief facility operator and shift supervisor of an affected facility shall obtain and keep current either a provisional or operator certification from ASME.

(b) The owner or operator of an affected facility shall cause an ASME-certified shift supervisor to be on duty at the affected facility at all times during periods of MWC unit operation. This requirement shall take effect 24 months after the date that ASME adopts a certification program for MWC unit (resource recovery facility) operators.

(c) The owner or operator of an affected facility shall develop and update on a yearly basis a site-specific operating manual that shall, at a minimum, address the following elements of MWC unit operation:

- (1) Summary of the applicable standards under this subpart;
- (2) Description of basic combustion theory applicable to an MWC unit;
- (3) Procedures for receiving, handling, and feeding MSW;
- (4) MWC unit startup, shutdown, and malfunction procedures;
- (5) Procedures for maintaining proper combustion air supply levels;
- (6) Procedures for operating the MWC unit within the standards established under this subpart;
- (7) Procedures for responding to periodic upset or off-specification conditions;
- (8) Procedures for minimizing particulate matter carryover;
- (9) Procedures for monitoring the degree of MSW burnout;
- (10) Procedures for handling ash;
- (11) Procedures for monitoring MWC unit emissions; and
- (12) Reporting and recordkeeping procedures.

(d) The owner or operator of an affected facility shall establish a program for reviewing the operating manual annually with each person who has responsibilities affecting the operation of an affected facility including, but not limited to, chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers.

(e) The initial review of the operating manual, as specified under paragraph (d) of this section, shall be conducted prior to assumption of responsibilities affecting MWC unit operation by any person required to undergo training under paragraph (d) of this section. Subsequent reviews of the manual shall be carried out annually by each such person.

(f) The operating manual shall be kept in a readily accessible location for all persons required to undergo training under paragraph (d) of this section. The operating manual and records of training shall be available for inspection by EPA upon request.

#### § 60.58a Compliance and performance testing.

(a) The standards under this subpart apply at all times, except during periods of startup, shutdown, or malfunction: *Provided, however,* That the duration of startup, shutdown, or malfunction shall not exceed 3 hours per occurrence.

(b) The following procedures and test methods shall be used to determine compliance with the emission standards for PM under § 60.52a:

(1) Method 1 shall be used to select sampling site and number of traverse points.

(2) Method 3 shall be used for gas analysis.

(3) Method 5 shall be used for determining compliance with the particulate matter emission standard. The minimum sample volume shall be 3.4 cubic meters (120 cubic feet). The temperature of the sample gas in the probe and filter holder shall be 160 °C (320 °F). An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Method 5 run.

(4) For each Method 5 run, the emission rate shall be determined using:

- (i) Oxygen or carbon dioxide measurements,
- (ii) Dry basis F factor, and
- (iii) Dry basis emission rate calculation procedures in Method 19.

(5) An owner or operator may request that compliance be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established during the initial compliance test.

(6) The owner or operator of an affected facility shall conduct an initial compliance test for particulate matter and opacity as required under § 60.8.

(7) Method 9 shall be used for determining compliance with the opacity standard.

(8) The owner or operator of an affected facility shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) for measuring opacity and record the output of the system.

(9) Following the date the initial compliance test for particulate matter is completed or is required to be completed under § 60.8 for an affected facility located within a large MWC plant, the owner or operator shall conduct a performance test for particulate matter on an annual basis (no more than 12 calendar months following the previous compliance test).

(10) Following the date the initial compliance test for particulate matter is completed or is required to be



completed under § 60.8 for an affected facility located within a small MWC plant, the owner or operator shall conduct a performance test for particulate matter on an annual basis (no more than 12 calendar months following the previous compliance test). If all three performance tests for a 3-year period indicate compliance with the particulate matter standard, the owner or operator may forego a performance test for the subsequent 2 years. At a minimum, a performance test for particulate matter shall be conducted every third year (no more than 36 months following the previous compliance test). If a performance test conducted every third year indicates compliance with the particulate matter standard, the owner or operator may forego a performance test for an additional 2 years.

(c) The following procedures and test methods shall be used to determine compliance with the standards for dioxin/furan emissions under § 60.53a:

(1) Method 23 shall be used for determining compliance with the dioxin/furan emission standards.

(2) The owner or operator of an affected facility shall conduct an initial compliance test for dioxin/furan emissions as required under § 60.8.

(3) Following the date of the initial compliance test or the date on which the initial compliance test is required to be completed under § 60.8, the owner or operator of an affected facility located within a large MWC plant shall conduct a performance test for dioxin/furan emissions on an annual basis (no more than 12 calendar months following the previous compliance test).

(4) Following the date of the initial compliance test or the date on which the initial compliance test is required under § 60.8, the owner or operator of an affected facility located within a small MWC plant shall conduct a performance test for dioxin/furan emissions on an annual basis (no more than 12 calendar months following the previous compliance test). If all three performance tests in a 3-year period indicate compliance with the dioxin/furan emissions standard, the owner or operator may forego a performance test for the subsequent 2 years. At a minimum, a performance test for dioxin/furan emissions shall be conducted every third year (no more than 36 months following the previous compliance test). If a performance test conducted every third year indicates compliance with the dioxin/furan emissions standard, the owner or operator may forego conducting a performance test for an additional 2 years.

(5) An owner or operator may request that compliance with the dioxin/furan emissions standard be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established during the initial compliance test.

(d) The following procedures and test methods shall be used for determining compliance with the sulfur dioxide standards under § 60.54a:

(1) The percentage reduction in the potential sulfur dioxide emissions (%P<sub>SO<sub>2</sub></sub>) is computed using the following formula:

$$\%P_{SO_2} = \frac{(E_i - E_o)}{E_i} \times 100$$

where:

E<sub>i</sub> is the daily potential sulfur dioxide emission rate.

E<sub>o</sub> is the daily sulfur dioxide emission rate measured at the outlet of the acid gas control device.

(2) Method 19 shall be used for determining the sulfur dioxide emission rate.

(3) An owner or operator may request that compliance with the sulfur dioxide emissions standard be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established during the initial compliance test.

(4) The owner or operator of an affected facility shall conduct an initial compliance test for sulfur dioxide as required under § 60.8. The sulfur dioxide compliance test shall be conducted over 24 consecutive unit operating hours at maximum MWC unit load. Compliance with the sulfur dioxide standard shall be determined using a 24-hour daily average.

(5) The owner or operator of an affected facility shall install, calibrate, maintain, and operate a CEMS for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system.

(6) Following the date of the initial compliance test or the date on which the initial compliance test is required to be completed under § 60.8, compliance with the sulfur dioxide standard shall be determined based on the arithmetic average of the hourly emission rates during each 24-hour daily period measured between 12:00 midnight and the following midnight using CEMS inlet and outlet data, if compliance is based on a percentage reduction, or outlet data

only if compliance is based on an emission limit.

(7) At a minimum CEMS data shall be obtained for 75 percent of the hours per day for 75 percent of the days per month the unit is operated and combusting MSW.

(8) The 1-hour averages required under paragraph (d)(5) of this section shall be expressed in nanograms per hour (pounds per hour) and used to calculate the 24-hour daily average emission rates. The 1-hour averages shall be calculated using the data points required under § 60.13(b). At least two data points shall be used to calculate each 1-hour average.

(9) All valid CEMS data shall be used in calculating emission rates and percent reductions even if the minimum CEMS data requirements of paragraph (d)(7) of this section are met.

(10) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(11) The CEMS shall be operated according to Performance Specification 1, 2, and 3 (Appendix B).

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 (Appendix F).

(13) The span value of the CEMS at the inlet to the sulfur dioxide control device is 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the MWC unit, and the span value of the CEMS at the outlet to the sulfur dioxide control device is 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the MWC unit.

(14) When sulfur dioxide emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or Method 19 to provide as necessary emission data for a minimum of 75 percent of the hours per day for 75 percent of the days per month the unit is operated and combusting MSW.

(e) The following procedures and test methods shall be used for determining compliance with the hydrogen chloride standards under § 60.54a:

(1) The percentage reduction in the potential hydrogen chloride emissions (%P<sub>HCl</sub>) is computed using the following formula:



$$\%P_{HCl} = \frac{(E_i - E_o)}{E_i} \times 100$$

where:

$E_i$  is the daily potential hydrogen chloride emission rate.

$E_o$  is the daily hydrogen chloride emission rate measured at the outlet of the acid gas control device.

(2) Method 26 shall be used for determining the hydrogen chloride emission rate.

(3) An owner or operator may request that compliance with the hydrogen chloride emissions standard be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established during the initial compliance test.

(4) The owner or operator of an affected facility shall conduct an initial compliance test for hydrogen chloride as required under § 60.8.

(5) Following the date of the initial compliance test or the date on which the initial compliance test is required under § 60.8, the owner or operator of an affected facility located within a large MWC plant shall conduct a performance test for hydrogen chloride on an annual basis (no more than 12 calendar months following the previous compliance test).

(6) Following the date of the initial compliance test or the date on which the initial compliance test is required under § 60.8, the owner or operator of an affected facility located within a small MWC plant shall conduct a performance test for hydrogen chloride on an annual basis (no more than 12 calendar months following the previous compliance test). If all three performance tests in a 3-year period indicate compliance with the hydrogen chloride standard, the owner or operator may forego a performance test for the subsequent 2 years. At a minimum, a performance test for hydrogen chloride shall be conducted every third year (no more than 36 months following the previous compliance test). If a performance test conducted every third year indicates compliance with the hydrogen chloride standard, the owner or operator may forego conducting a performance test for an additional 2 years.

(f) The following procedures and test methods shall be used to determine compliance with the nitrogen oxides standard under § 60.55a:

(1) Method 19 shall be used for determining the nitrogen oxides emission rate.

(2) An owner or operator may request that compliance with the nitrogen oxides emissions standard be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility shall be established during the initial compliance test.

(3) The owner or operator of an affected facility subject to the nitrogen oxides standard under § 60.55a shall conduct an initial compliance test for nitrogen oxides as required under § 60.8. The initial compliance test for nitrogen oxides shall be conducted over 24 consecutive hours of unit operation using a CEMS for measuring nitrogen oxides to determine compliance with the nitrogen oxides standard. Compliance with the nitrogen oxides standard shall be determined using a 24-hour daily average.

(4) The owner or operator of an affected facility subject to the nitrogen oxides emissions standard of § 60.55a shall install, calibrate, maintain, and operate a CEMS for measuring nitrogen oxides discharged to the atmosphere and record the output of the system.

(5) Following the initial compliance test or the date on which the initial compliance test is required to be completed under § 60.8, compliance with the emission limits for nitrogen oxides required under § 60.55a shall be determined based on the arithmetic average of the hourly emission rates during each 24-hour daily period measured between 12:00 midnight and the following midnight using CEMS data.

(6) At a minimum CEMS data shall be obtained for 75 percent of the hours per day for 75 percent of the days per month the unit is operated and combusting MSW.

(7) The 1-hour averages required by paragraph (f)(6) of this section shall be expressed in parts per million volume (dry basis) and used to calculate the 24-hour daily average emission rates under § 60.55a. The 1-hour averages shall be calculated using the data points required under § 60.13(b). At least two data points shall be used to calculate each 1-hour average.

(8) All valid CEMS data must be used in calculating emission rates even if the minimum CEMS data requirements of paragraph (f)(7) of this section are met.

(9) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(10) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 (Appendix F).

(11) When nitrogen oxides emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emission data calculations to determine compliance shall be made using other monitoring systems as approved by the Administrator or Method 19 to provide as necessary emission data for a minimum of 75 percent of the hours per day for 75 percent of the days per month the unit is operated and combusting MSW.

(g) The following procedures shall be used for determining compliance with the operating standards under § 60.56a:

(1) Compliance with the carbon monoxide emission limits in § 60.56a(a) shall be determined using a 4-hour block average.

(2) The owner or operator of an affected facility shall install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide at the combustor outlet and record the output of the system.

(3) An owner or operator may request that compliance with the carbon monoxide emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen.

(4) The owner or operator of an affected facility shall install, calibrate, maintain, and operate a steam flow meter and measure steam flow in kilograms per hour (pounds per hour) steam on a continuous basis and record the output of the monitor. Steam flow shall be calculated in 1-hour block averages.

(5) The owner or operator of an affected facility shall install, calibrate, maintain, and operate a device for measuring temperature and measure the temperature of the flue gas stream at the inlet to the particulate matter air pollution control device on a continuous basis and record the output of the device. Temperature shall be calculated in 4-hour block averages.

(6) Maximum MWC unit load shall be determined during the initial compliance test. Maximum MWC unit load shall be the maximum 1-hour load achieved during the initial compliance test or any subsequent tests.

(7) The minimum data requirement under this section is 75 percent of the hours per day for 75 percent of the days per month the MWC unit is operated and combusting MSW.

(8) All valid data must be used in calculating the parameters specified under paragraph (g) of this section even if the minimum data requirements of paragraph (g)(6) of this section are met.



(9) Quarterly accuracy determinations and daily calibration drift tests for carbon monoxide CEMS shall be performed in accordance with Procedure 1 (Appendix F).

(10) (i) Except as provided under paragraph (g)(10)(iv) of this section, the initial demonstration of compliance with the percent reduction requirement (annual average) contained in the definition of "processed MSW or RDF" in § 60.51a and the provisions of §§ 60.56a (d), (e), and (f) shall be required at the end of the second full calendar year (January through December) after the date of initial start-up of an affected MWC. The annual average percent MSW reduction calculated and reported at the end of the first full calendar year after initial start-up shall not be used to determine compliance.

(ii) Compliance with the percent reduction requirement contained in the definition of "processed MSW or RDF" in § 60.51a shall be determined by calculating the percentage difference between the weight of MSW received at the affected facility (as defined in § 60.51a) and the weight of MSW combusted in the MWC unit or the weight of separated recoverable materials. Except as provided under paragraph (iv) of this section, beginning the month after the date of the initial start-up for new MWC's, the percent reduction in MSW shall be calculated on a monthly basis using the monthly total weights recorded in compliance with §§ 60.59a (8) and (9). At the end of each full calendar year (January through December) the annual average percent MSW reduction (by weight) shall be calculated. In calculating the percent MSW reduction, a maximum of 10 percent MSW weight reduction shall be attributed to separation of yard waste. If the annual average percentage reduction requirement contained in the definition of "processed MSW or RDF" in § 60.51a is not achieved, the MSW or RDF is not considered to be processed MSW or RDF.

(iii) An owner or operator who elects to achieve, either wholly or partially, the percent reduction requirement contained in the definition of "processed MSW or RDF" in § 60.51a or the prohibition of vehicle batteries in § 60.56a (e) or the removal of household batteries in § 60.56a (f) through an off-site source reduction or materials separation (recycling) program shall submit a separation plan which contains sufficient information to measure the performance of the off-site separation program on an annual basis beginning the first full calendar year (January

through December) after the initial start-up of the affected facility, except as provided under paragraph (g)(10)(iv) of this section. The off-site separation plan shall be submitted along with the initial compliance demonstration results.

(iv) The owner or operator of an affected facility that commenced construction after December 20, 1989, but on or before (date of publication of final rule), shall meet the requirements of paragraphs (g)(10)(ii) and (g)(10)(iii) of this section beginning the month after start-up or January 1993, whichever is later. For such affected facilities, the initial demonstration of compliance with the percent reduction requirement (annual average) contained in the definition of "processed MSW or RDF" in § 60.51a and the provisions of §§ 60.56a (d), (e), and (f) shall be required at the end of the second full calendar year (January through December) after the date of initial start-up of the affected MWC or at the end of calendar year 1994, whichever is later.

(v) The owner or operator of an affected facility is responsible for operating the affected facility in compliance with all provisions of the standards including the prohibition on combustion of unprocessed MSW and vehicle batteries under §§ 60.56a (d) and (e) and the implementation of a program for removal of household batteries under § 60.56a (f). In cases where another party provides processed MSW, or removes vehicle batteries or removes household batteries, the provider of the service may become a co-operator of the affected facility. If the party providing the off-site processing of MSW, removal of vehicle batteries or removal of household batteries elects to become a co-operator for purposes of demonstrating compliance with the provisions of §§ 60.56a (d), (e) or (f), the owner or operator of the affected facility shall submit, at the time of submittal of the initial compliance demonstration related to the requirements under §§ 60.56a (d), (e) and (f):

(A) A copy of a validly executed contract between the owner and operator of the affected facility and the party providing the processing of MSW, removal of vehicle batteries, or removal of household batteries which contain the following provisions:

(1) An undertaking by the party that is co-operator or sole operator of the affected facility within the meaning of § 111 of the Clean Air Act, 42 U.S.C. 7411, regarding compliance with the requirements under §§ 60.56a (d), (e) or (f); and

(2) An undertaking by the party to meet the requirements under §§ 60.56a

(d), (e) or (f) and a description of the specific actions that will be implemented to comply with these requirements; and

(B) A certified statement signed by an authorized official representing the party that they agree to become a co-operator, or sole operator, for the purpose of demonstrating compliance with the requirements under §§ 60.56a (d), (e) or (f) and recognizing that enforcement actions, including penalties, may be taken against the party for failure to demonstrate compliance with these requirements.

#### § 60.59a Reporting and recordkeeping requirements.

(a) The owner or operator of an affected facility shall provide notification of intent to construct and of planned initial start-up date. The MWC unit capacity and MWC plant capacity shall be provided at the time of the notification of construction.

(b) The owner or operator of an affected facility subject to the standards under § 60.52a, § 60.53a, § 60.54a, § 60.55a, or § 60.56a shall maintain records of the following information for each affected facility:

(1) Calendar date.

(2) The emission rates and parameters measured.

(3) Identification of the operating days when the calculated sulfur dioxide and nitrogen oxides emission rates or when the operating parameters exceeded the applicable standards, with reasons for such exceedances as well as a description of corrective actions taken.

(4) Identification of operating days for which sulfur dioxide or nitrogen oxides emissions or operational data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

(5) Identification of the times when sulfur dioxide or nitrogen oxides emission or operational data have been excluded from the calculation of average emission rates or parameters and the reasons for excluding data.

(6) The results of daily sulfur dioxide, nitrogen oxides, and carbon monoxide CEMS drift tests and accuracy assessments as required under Appendix F, Procedure 1.

(7) The results of all annual performance tests conducted to determine compliance with the particulate matter, dioxin/furan, hydrogen chloride, and mercury standards.

(8) Except as provided under paragraph (b)(13) of this section, beginning the month after the date of the initial start-up, the amount (by weight)



of MSW or RDF received on a monthly basis at the affected facility, the amount (by weight) of MSW or RDF combusted on a monthly basis, and the amount of recoverable materials (by type and weight) separated on a monthly basis. Separated paper and paperboard are to be stored in a covered area and protected from rain and moisture, so that the moisture content of the paper and paperboard when weighed is similar to their moisture content when received in the MSW or RDF.

(9) Except as provided under paragraph (b)(13) of this section, beginning the month after the date of the initial start-up, the estimated amount (by type and weight) of recoverable materials reduced or separated for recovery on a monthly basis through an off-site or community source reduction or materials separation (recycling) program.

(10) Except as provided under paragraph (b)(13) of this section, beginning at the end of the first full calendar year after the date of initial start-up, the calculations of the annual average percentage reduction in MSW achieved for the previous calendar year.

(11) Except as provided under paragraph (b)(13) of this section, beginning the month after the date of the initial start-up, the amount (by weight) of vehicle batteries on a monthly basis that is separated for recovery.

(12) [Reserved]

(13) The owner or operator of an affected facility that commenced construction after December 20, 1989 but on or before (date of promulgation), shall meet the requirements of paragraphs (b) (8), (9), (10), (11), and (12) of this section beginning the month after

initial start-up or January 1993, whichever is later.

(c) The owner or operator of an affected facility shall submit the initial compliance test data, the performance evaluation of the CEMS using the applicable performance specifications in Appendix B, and the maximum MWC unit load.

(d) A plan describing the procedures for separating materials for recovery to achieve the 25 percent or greater MSW reduction requirement contained in the definition of "processed MSW or RDF" in § 60.51a and describing the procedures for ensuring that vehicle batteries are not combusted in the affected facility and a description of the program for removal of household batteries shall be provided at the time of submittal of the initial demonstration of compliance with the requirements of §§ 60.56a (d), (e), and (f). For affected facilities that commenced construction after December 20, 1989 but on or before (date of promulgation), such information shall be provided by the 30th day following the end of calendar year 1994 or the end of the second full calendar year after initial start-up, whichever is later. For all other affected facilities, such information shall be provided by the 30th day following the end of the second full calendar year after initial start-up.

(e) The owner or operator of an affected facility shall submit quarterly compliance reports for sulfur dioxide, nitrogen oxide (if applicable), carbon monoxide, load level, and temperature to the Administrator containing the information recorded under paragraph (b) of this section for each pollutant or parameter. Such reports shall be

postmarked by the 30th day following the end of each calendar quarter.

(f) The owner or operator of an affected facility shall submit quarterly excess emission reports containing the information recorded under paragraph (b) of this section, as applicable, for opacity. Such excess emission reports shall be postmarked by the 30th day following the end of each calendar quarter.

(g) The owner or operator of an affected facility shall submit annual reports to the Administrator containing the information recorded under paragraph (b) of this section for all pollutants regulated under this subpart, as applicable, to the affected facility. Such reports shall be postmarked by the 30th day following the end of each calendar year.

(h) Records of CEMS, steam flow, and temperature data shall be maintained for at least 2 years after date of recordation and be made available for inspection upon request.

(i) Records showing the names of persons who have completed review of the operating manual, including the date of the initial review and all subsequent annual reviews, shall be maintained for at least 2 years after date of manual review and be made available for inspection upon request.

(j) A description of the procedures employed for ensuring that unprocessed MSW or RDF is not combusted in an affected facility shall be maintained, along with associated records to demonstrate use of such procedures, and made available for inspection upon request.

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December 20, 1989

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## Part VII

### Office of Management and Budget

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Governmentwide Guidance for New  
Restrictions on Lobbying; Interim Final  
Guidance



**OFFICE OF MANAGEMENT AND BUDGET****Governmentwide Guidance for New Restrictions on Lobbying**

**AGENCY:** Office of Management and Budget

**ACTION:** Interim Final Guidance

**SUMMARY:** This interim final guidance is called for by Section 319 of Public Law 101-121. Section 319 generally prohibits recipients of Federal contracts, grants, and loans from using appropriated funds for lobbying the Executive or Legislative Branches of the Federal Government in connection with a specific contract, grant, or loan. Section 319 also requires that each person who requests or receives a Federal contract, grant, cooperative agreement, loan, or a Federal commitment to insure or guarantee a loan, must disclose lobbying.

**DATE:** This guidance is effective December 23, 1989. Comments on OMB's interim final guidance must be in writing and must be received by [60 days from publication]. Late-filed comments will be considered to the extent practicable.

**ADDRESS:** Office of Management and Budget, 10300 New Executive Office Building, Washington, DC 20503.

**FOR FURTHER INFORMATION CONTACT:** For contracts, contact Richard C. Loeb, Office of Federal Procurement Policy, OMB (telephone: 202-395-3300). For grants and loans, contact Barbara F. Kahlow, Financial Management Division, OMB (telephone: 202-395-3053).

**SUPPLEMENTARY INFORMATION:****A. Background.**

On October 23, 1989, the President signed into law the Department of the Interior and Related Agencies Appropriations Act for Fiscal Year 1990 ("the Act"). Section 319 of the Act amends title 31, United States Code, by adding a new Section 1352, entitled "Limitation on use of appropriated funds to influence certain Federal contracting and financial transactions." Section 1352 takes effect with respect to Federal contracts, grants, loans, cooperative agreements, loan insurance commitments, and loan guarantee commitments that are entered into or made more than 60 days after the date of the enactment of the Act, i.e., December 23, 1989.

Section 1352 requires the Director of the Office of Management and Budget to issue governmentwide guidance for agency implementation of, and compliance with, the requirements of this section. The Conference Report indicates that the conferees "expect that all agencies shall expeditiously promulgate regulations to implement the requirements of this section, and



that all such regulations shall be uniform and shall comply with the government-wide guidance issued by the Director of the Office of Management and Budget pursuant to paragraph (b)(7). Also, major agencies, as designated by OMB, shall issue a common rule complying with the guidance issued by OMB."

#### B. Interim Final Guidance.

OMB's interim final guidance is prepared in regulation format to facilitate its use by the executive departments and agencies in preparing the common rule called for in the Conference Report. There will be two common rules issued by the executive departments and agencies as interim final rules within 90 days of this interim final guidance: a common rule to appear in the Federal Acquisition Regulation (FAR) for most contracts; and a common rule for contracts not subject to the FAR, grants, loans, cooperative agreements, loan insurance commitments, and loan guarantee commitments ("nonprocurement"). The FAR common rule will contain the same substance as the OMB guidance, without elaboration, but will be reformatted, with additional instructions. The nonprocurement common rule will be verbatim to the OMB guidance. All three documents (OMB's interim final guidance and the two interim final common rules) will share a public docket. The final versions of all three will be published simultaneously.

The FAR common rule will be co-signed by the three agencies (the Department of Defense, the General Services Administration, and the National Aeronautics and Space Administration) authorized to issue the FAR rulemaking, effective for all executive departments and agencies. The nonprocurement common rule will be signed by the following 29 major agencies: Departments of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, Housing and Urban Development, Interior, Justice, Labor, State, Transportation, Treasury, Veterans Affairs; ACTION, Agency for International Development, Environmental Protection Agency, Export-Import Bank of the United States, Federal Emergency Management Agency, General Services Administration, National Aeronautics and Space Administration, National Endowment for the Arts, National Endowment for the Humanities, National Science Foundation, Overseas Private Investment Corporation, Peace Corps, Small Business Administration, Tennessee Valley Authority and United States Information Agency.

The following Circulars of the Office of Management and Budget (OMB) will be revised to indicate a cross reference to the requirements in the OMB guidance: OMB Circular A-21, "Cost Principles for Educational Institutions;" OMB Circular A-87, "Cost Principles for State and Local Governments;" and, OMB Circular A-122, "Cost Principles for Nonprofit Organizations." Costs made specifically unallowable by the requirements in the guidance are not made allowable under any of the provisions of



these Circulars. Conversely, costs that are specifically unallowable under the provisions of these Circulars are not made allowable under the requirements in the guidance.

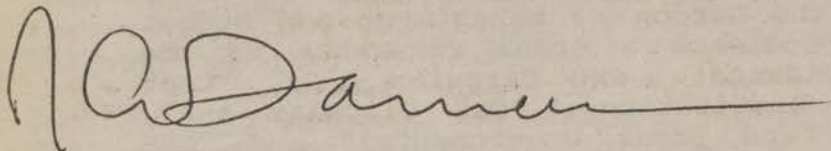
Costs made specifically unallowable by the requirements in the OMB guidance will not be made allowable under any of the provisions of the FAR. Conversely, costs that are specifically unallowable under the provisions of the FAR are not made allowable under the requirements in the OMB guidance.

The guidance calls for an annual report to be prepared by each Inspector General and to be submitted to Congress. Copies of these reports should be forwarded to the Financial Management Division of OMB as well.

The guidance also calls for semi-annual compilations of disclosure reports to be prepared by each agency and to be submitted to Congress. Agencies shall submit a "negative" report if no disclosure reports were received.

#### C. Paperwork Reduction Act.

This interim final guidance contains information collection requirements. Accordingly, a Paperwork Reduction Act emergency approval was requested pursuant to 44 U.S.C. 3507(g) and 5 C.F.R. 1320.18 and was granted under OMB control number 0348-0046. OMB estimates the reporting burden for this information collection to average 30 minutes per response. The time necessary for filing the first disclosure may differ from that for the subsequent disclosures. However, in the absence of experience with such reporting, OMB does not have sufficient data to determine the universe of total covered Federal actions or the volume of activity that will be affected by this guidance. Therefore, an estimate of the total burden of this information collection requirement is not provided at this time. Public comment is requested to assist in accurately estimating the burden of this information collection, including: (1) estimates of the amount of time required to comply with this reporting requirement, (2) estimates of the number of expected disclosure reports, and (3) the basis for these estimates. OMB is also interested in comments on the feasibility of electronic or other methods for filing the information on the disclosure standard form to the Federal Government.



Richard G. Darman  
Director.



## PART \_\_\_\_ - NEW RESTRICTIONS ON LOBBYING

## Subpart A - General

## Sec.

- \_\_\_\_.100 Conditions on use of funds.
- \_\_\_\_.105 Definitions.
- \_\_\_\_.110 Certification and Disclosure.

## Subpart B - Activities by Own Employees

- \_\_\_\_.200 Agency and legislative liaison.
- \_\_\_\_.205 Professional and technical services.
- \_\_\_\_.210 Reporting.

## Subpart C - Activities by Other than Own Employees

- \_\_\_\_.300 Professional and technical services.

## Subpart D - Penalties and Enforcement

- \_\_\_\_.400 Penalties.
- \_\_\_\_.405 Penalty procedures.
- \_\_\_\_.410 Enforcement.

## Subpart E - Exemptions

- \_\_\_\_.500 Secretary of Defense.

## Subpart F - Agency Reports

- \_\_\_\_.600 Semi-annual compilation.
- \_\_\_\_.605 Inspector General report.

## Appendix A to Part \_\_\_\_ - Certification Regarding Lobbying

## Appendix B to Part \_\_\_\_ - Disclosure Form to Report Lobbying

## Appendix C to Part \_\_\_\_ - Contract Clause

Authority: Section 319, Public Law 101-121 (31 U.S.C. 1352);  
[citation to Agency rulemaking authority].

## Subpart A - General

- (\_\_\_\_.100 Conditions on use of funds.

(a) No appropriated funds may be expended by the recipient of a Federal contract, grant, loan, or cooperative agreement to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal,



amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(b) Each person who requests or receives from an agency a Federal contract, grant, loan, or cooperative agreement shall file with that agency a certification, set forth in Appendix A, that the person has not made, and will not make, any payment prohibited by paragraph (a) of this section.

(c) Each person who requests or receives from an agency a Federal contract, grant, loan, or a cooperative agreement shall file with that agency a disclosure form, set forth in Appendix B, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under paragraph (a) of this section if paid for with appropriated funds.

(d) Each person who requests or receives from an agency a commitment providing for the United States to insure or guarantee a loan shall file with that agency a statement, set forth in Appendix A, whether that person has made or has agreed to make any payment to influence or attempt to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with that loan insurance or guarantee.

(e) Each person who requests or receives from an agency a commitment providing for the United States to insure or guarantee a loan shall file with that agency a disclosure form, set forth in Appendix B, if that person has made or has agreed to make any payment to influence or attempt to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with that loan insurance or guarantee.

(\_\_\_\_\_.105 Definitions.

For purposes of this part:

(a) Agency, as defined in 5 U.S.C. 552(f), includes Federal executive departments and agencies as well as independent regulatory commissions and Government corporations, as defined in 31 U.S.C. 9101(1).

(b) Covered Federal action means any of the following Federal actions:

- (1) The awarding of any Federal contract;
- (2) The making of any Federal grant;
- (3) The making of any Federal loan;
- (4) The entering into of any cooperative agreement; and,
- (5) The extension, continuation, renewal, amendment, or



modification of any Federal contract, grant, loan, or cooperative agreement.

Covered Federal action does not include receiving from an agency a commitment providing for the United States to insure or guarantee a loan. Loan guarantees and loan insurance are addressed independently within this part.

(c) Federal contract means an acquisition contract awarded by an agency, including those subject to the Federal Acquisition Regulation (FAR), and any other acquisition contract for real or personal property or services not subject to the FAR.

(d) Federal cooperative agreement means a cooperative agreement entered into by an agency.

(e) Federal grant means an award of financial assistance in the form of money, or property in lieu of money, by the Federal Government or a direct appropriation made by law to any person. The term does not include technical assistance which provides services instead of money, or other assistance in the form of revenue sharing, loans, loan guarantees, loan insurance, interest subsidies, insurance, or direct United States cash assistance to an individual.

(f) Federal loan means a loan made by an agency. The term does not include loan guarantee or loan insurance.

(g) Indian tribe and tribal organization have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B). Alaskan Natives are included under the definitions of Indian tribes in that Act.

(h) Influencing or attempting to influence means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

(i) Loan guarantee and loan insurance mean an agency's guarantee or insurance of a loan made by a person.

(j) Local government means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

(k) Officer or employee of an agency includes the following individuals who are employed by an agency:

(1) An individual who is appointed to a position in the Government under title 5, U.S. Code, including a position



under a temporary appointment;

(2) A member of the uniformed services as defined in section 101(3), title 37, U.S. Code;

(3) A special Government employee as defined in section 202, title 18, U.S. Code; and,

(4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, U.S. Code appendix 2.

(1) Person means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

(m) Reasonable compensation means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

(n) Reasonable payment means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

(o) Recipient includes all contractors, subcontractors at any tier, and subgrantees at any tier of the recipient of funds received in connection with a Federal contract, grant, loan, or cooperative agreement. The term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

(p) Regularly employed means, with respect to an officer or employee of a person requesting or receiving a Federal contract, grant, loan, or cooperative agreement or a commitment providing for the United States to insure or guarantee a loan, an officer or employee who is employed by such person for at least 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract, grant, loan, cooperative agreement, loan insurance commitment, or loan guarantee commitment. An officer or employee who is employed by such person for less than 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

(q) State means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or



possession of the United States, an agency or instrumentality of a State, and a multi-State, regional, or interstate entity having governmental duties and powers.

(\_\_\_\_).110 Certification and Disclosure.

(a) Each person shall file a certification, and a disclosure form, if required, with each submission that initiates agency consideration of such person for:

- (1) Award of a Federal contract, grant, or cooperative agreement exceeding \$100,000; or
- (2) An award of a Federal loan or a commitment providing for the United States to insure or guarantee a loan exceeding \$150,000.

(b) Each person shall file a certification, and a disclosure form, if required, upon receipt by such person of:

- (1) A Federal contract, grant, or cooperative agreement exceeding \$100,000; or
- (2) A Federal loan or a commitment providing for the United States to insure or guarantee a loan exceeding \$150,000, unless such person previously filed a certification, and a disclosure form, if required, under paragraph (a) of this section.

(c) Each person shall file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under paragraphs (a) or (b) of this section. An event that materially affects the accuracy of the information reported includes:

- (1) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or
- (2) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or,
- (3) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(d) Any person who requests or receives from a person referred to in paragraphs (a) or (b) of this section:

- (1) A subcontract exceeding \$100,000 at any tier under a Federal contract;
- (2) A subgrant, contract, or subcontract exceeding \$100,000 at any tier under a Federal grant;
- (3) A contract or subcontract exceeding \$100,000 at any tier under a Federal loan exceeding \$150,000; or,
- (4) A contract or subcontract exceeding \$100,000 at any tier under a Federal cooperative agreement,



shall file a certification, and a disclosure form, if required, to the next tier above.

(e) All disclosure forms, but not certifications, shall be forwarded from tier to tier until received by the person referred to in paragraphs (a) or (b) of this section. That person shall forward all disclosure forms to the agency.

(f) Any certification or disclosure form filed under paragraph (e) shall be treated as a material representation of fact upon which all receiving tiers shall rely. All liability arising from an erroneous representation shall be borne solely by the tier filing that representation and shall not be shared by any tier to which the erroneous representation is forwarded. Submitting an erroneous certification or disclosure constitutes a failure to file the required certification or disclosure, respectively. If a person fails to file a required certification or disclosure, the United States may pursue all available remedies, including those authorized by section 1352, title 31, U.S. Code.

(g) For awards and commitments in process prior to December 23, 1989, but not made before that date, certifications shall be required at award or commitment, covering activities occurring between December 23, 1989, and the date of award or commitment. However, for awards and commitments in process prior to the December 23, 1989 effective date of these provisions, but not made before December 23, 1989, disclosure forms shall not be required at time of award or commitment but shall be filed within 30 days.

(h) No reporting is required for an activity paid for with appropriated funds if that activity is allowable under either Subpart B or C.

#### Subpart B - Activities by Own Employees

{ \_\_.200 Agency and legislative liaison.

(a) The prohibition on the use of appropriated funds, in { \_\_.100 (a), does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a Federal contract, grant, loan, or cooperative agreement if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(b) For purposes of paragraph (a) of this section, providing any information specifically requested by an agency or Congress is allowable at any time.

(c) For purposes of paragraph (a) of this section, the following agency and legislative liaison activities are allowable at any



time only where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency (including individual demonstrations) the qualities and characteristics of the person's products or services, conditions or terms of sale, and service capabilities; and,

(2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(d) For purposes of paragraph (a) of this section, the following agency and legislative liaison activities are allowable only where they are prior to formal solicitation of any covered Federal action:

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and,

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Public Law 95-507 and other subsequent amendments.

(e) Only those activities expressly authorized by this section are allowable under this section.

(\_\_\_\_.205 Professional and technical services.

(a) The prohibition on the use of appropriated funds, in (\_\_\_\_.100 (a), does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a Federal contract, grant, loan, or cooperative agreement or an extension, continuation, renewal, amendment, or modification of a Federal contract, grant, loan, or cooperative agreement if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal contract, grant, loan, or cooperative agreement or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal contract, grant, loan, or cooperative agreement.

(b) For purposes of paragraph (a) of this section, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a



licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(c) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation, or reasonably expected to be required by law or regulation, and any other requirements in the actual award documents.

(d) Only those services expressly authorized by this section are allowable under this section.

(\_\_\_).210 Reporting.

No reporting is required with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

**Subpart C - Activities by Other than Own Employees**

(\_\_\_).300 Professional and technical services.

(a) The prohibition on the use of appropriated funds, in (\_\_\_).100 (a), does not apply in the case of any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action, if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal contract, grant, loan, or cooperative agreement or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal contract, grant, loan, or cooperative agreement.

(b) The reporting requirements in (\_\_\_).110 (a) and (b) regarding filing a disclosure form by each person, if required, shall not apply with respect to professional or technical services rendered



directly in the preparation, submission, or negotiation of any commitment providing for the United States to insure or guarantee a loan.

(c) For purposes of paragraph (a) of this section, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(d) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation, or reasonably expected to be required by law or regulation, and any other requirements in the actual award documents.

(e) Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(f) Only those services expressly authorized by this section are allowable under this section.

#### Subpart D - Penalties and Enforcement

##### (\_\_\_).400 Penalties.

(a) Any person who makes an expenditure prohibited herein shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure.



(b) Any person who fails to file or amend the disclosure form (see Appendix B) to be filed or amended if required herein, shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

(c) A filing or amended filing on or after the date on which an administrative action for the imposition of a civil penalty is commenced does not prevent the imposition of such civil penalty for a failure occurring before that date. An administrative action is commenced with respect to a failure when an investigating official determines in writing to commence an investigation of an allegation of such failure.

(d) In determining whether to impose a civil penalty, and the amount of any such penalty, by reason of a violation by any person, the agency shall consider the nature, circumstances, extent, and gravity of the violation, the effect on the ability of such person to continue in business, any prior violations by such person, the degree of culpability of such person, the ability of the person to pay the penalty, and such other matters as may be appropriate.

(e) First offenders under paragraphs (a) or (b) of this section shall be subject to a civil penalty of \$10,000, absent aggravating circumstances. Second and subsequent offenses by persons shall be subject to an appropriate civil penalty between \$10,000 and \$100,000, as determined by the agency head or his or her designee.

(f) An imposition of a civil penalty under this section does not prevent the United States from seeking any other remedy that may apply to the same conduct that is the basis for the imposition of such civil penalty.

{ \_\_\_\_ .405 Penalty procedures.

Agencies shall impose and collect civil penalties pursuant to the provisions of the Program Fraud and Civil Remedies Act, 31 U.S.C. sections 3803 (except subsection (c)), 3804, 3805, 3806, 3807, 3808, and 3812, insofar as these provisions are not inconsistent with the requirements herein.

{ \_\_\_\_ .410 Enforcement.

The head of each agency shall take such actions as are necessary to ensure that the provisions herein are vigorously implemented and enforced in that agency.



**Subpart E - Exemptions**

(\_\_\_\_.500 Secretary of Defense.

(a) The Secretary of Defense may exempt, on a case-by-case basis, a covered Federal action from the prohibition whenever the Secretary determines, in writing, that such an exemption is in the national interest. The Secretary shall transmit a copy of each such written exemption to Congress immediately after making such a determination.

(b) The Department of Defense may issue supplemental regulations to implement paragraph (a) of this section.

**Subpart F - Agency Reports**

(\_\_\_\_.600 Semi-annual compilation.

(a) The head of each agency shall collect and compile the disclosure reports (see Appendix B) and, on May 31 and November 30 of each year, submit to the Secretary of the Senate and the Clerk of the House of Representatives a report containing a compilation of the information contained in the disclosure reports received during the six-month period ending on March 31 or September 30, respectively, of that year.

(b) The report, including the compilation, shall be available for public inspection 30 days after receipt of the report by the Secretary and the Clerk.

(c) Information that involves intelligence matters shall be reported only to the Select Committee on Intelligence of the Senate, the Permanent Select Committee on Intelligence of the House of Representatives, and the Committees on Appropriations of the Senate and the House of Representatives in accordance with procedures agreed to by such committees. Such information shall not be available for public inspection.

(d) Information that is classified under Executive Order 12356 or any successor order shall be reported only to the Committee on Foreign Relations of the Senate and the Committee on Foreign Affairs of the House of Representatives or the Committees on Armed Services of the Senate and the House of Representatives (whichever such committees have jurisdiction of matters involving such information) and to the Committees on Appropriations of the Senate and the House of Representatives in accordance with procedures agreed to by such committees. Such information shall not be available for public inspection.

(e) The first semi-annual compilation shall be submitted on May 31, 1990, and shall contain a compilation of the disclosure reports received from December 23, 1989 to March 31, 1990.



(f) Major agencies, designated by the Office of Management and Budget (OMB), are required to provide machine-readable compilations to the Secretary of the Senate and the Clerk of the House of Representatives no later than with the compilations due on May 31, 1991. OMB shall provide detailed specifications in a memorandum to these agencies.

(g) Non-major agencies are requested to provide machine-readable compilations to the Secretary of the Senate and the Clerk of the House of Representatives.

(h) Agencies shall keep the originals of all disclosure reports in the official files of the agency.

{\_\_\_.605 Inspector General report.

(a) The Inspector General, or other official as specified in paragraph (b) of this section, of each agency shall prepare and submit to Congress each year, commencing with submission of the President's Budget in 1991, an evaluation of the compliance of that agency with, and the effectiveness of, the requirements herein. The evaluation may include any recommended changes that may be necessary to strengthen or improve the requirements.

(b) In the case of an agency that does not have an Inspector General, the agency official comparable to an Inspector General shall prepare and submit the annual report, or, if there is no such comparable official, the head of the agency shall prepare and submit the annual report.

(c) The annual report shall be submitted at the same time the agency submits its annual budget justifications to Congress.

(d) The annual report shall include the following: All alleged violations relating to the agency's covered Federal actions during the year covered by the report, the actions taken by the head of the agency in the year covered by the report with respect to those alleged violations and alleged violations in previous years, and the amounts of civil penalties imposed by the agency in the year covered by the report.



## Appendix A to Part \_\_\_\_ - Certification Regarding Lobbying

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.



**Statement for Loan Guarantees and Loan Insurance**

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Appendix B to Part \_\_\_\_ - Disclosure Form to Report Lobbying.

[See attached.]



**DISCLOSURE OF LOBBYING ACTIVITIES**Approved by OMB  
0348-0046Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352  
(See reverse for public burden disclosure.)

<b>1. Type of Federal Action:</b> <input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance	<b>2. Status of Federal Action:</b> <input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award	<b>3. Report Type:</b> <input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change <b>For Material Change Only:</b> year _____ quarter _____ date of last report _____
<b>4. Name and Address of Reporting Entity:</b> <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known:  Congressional District, if known: _____	<b>5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:</b>  Congressional District, if known: _____	
<b>6. Federal Department/Agency:</b>	<b>7. Federal Program Name/Description:</b>  CFDA Number, if applicable: _____	
<b>8. Federal Action Number, if known:</b>	<b>9. Award Amount, if known:</b> \$ _____	
<b>10. a. Name and Address of Lobbying Entity (if individual, last name, first name, MI):</b>  <div style="border: 1px solid black; height: 100px; margin-top: 5px;"></div>		
<b>b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):</b>  <div style="border: 1px solid black; height: 100px; margin-top: 5px;"></div>		
(attach Continuation Sheet(s) SF-LLL-A, if necessary)		
<b>11. Amount of Payment (check all that apply):</b> \$ _____ <input type="checkbox"/> actual <input type="checkbox"/> planned	<b>13. Type of Payment (check all that apply):</b> <input type="checkbox"/> a. retainer <input type="checkbox"/> b. one-time fee <input type="checkbox"/> c. commission <input type="checkbox"/> d. contingent fee <input type="checkbox"/> e. deferred <input type="checkbox"/> f. other; specify: _____	
<b>12. Form of Payment (check all that apply):</b> <input type="checkbox"/> a. cash <input type="checkbox"/> b. in-kind; specify: nature _____ value _____		
<b>14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11:</b>  <div style="border: 1px solid black; height: 150px; margin-top: 5px;"></div>		
(attach Continuation Sheet(s) SF-LLL-A, if necessary)		
<b>15. Continuation Sheet(s) SF-LLL-A attached:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		
<b>16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.</b>	<b>Signature:</b> _____ <b>Print Name:</b> _____ <b>Title:</b> _____ <b>Telephone No.:</b> _____ <b>Date:</b> _____	
<b>Federal Use Only:</b>		Authorized for Local Reproduction Standard Form - LLL



**INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES**

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Use the SF-LLL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee", then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.  
(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the Federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) of Congress that were contacted.
15. Check whether or not a SF-LLL-A Continuation Sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.



**DISCLOSURE OF LOBBYING ACTIVITIES  
CONTINUATION SHEET**Approved by OMB  
0348-0046

Reporting Entity: \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_



**Appendix C to Part \_\_\_\_ - Contract Clause****NEW RESTRICTIONS ON LOBBYING**

(a) Definitions. As used in this clause,

"Agency", as defined in 5 U.S.C. 552(f), includes Federal executive departments and agencies as well as independent regulatory commissions and Government corporations, as defined in 31 U.S.C. 9101(1).

"Covered Federal action" means any of the following Federal actions:

- (1) The awarding of any Federal contract;
- (2) The making of any Federal grant;
- (3) The making of any Federal loan;
- (4) The entering into of any cooperative agreement; and,
- (5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

Covered Federal action does not include receiving from an agency a commitment providing for the United States to insure or guarantee a loan.

"Indian tribe" and "tribal organization" have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B). Alaskan Natives are included under the definitions of Indian tribes in that Act.

"Influencing or attempting to influence" means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government" means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency" includes the following individuals who are employed by an agency:

- (1) An individual who is appointed to a position in the Government under title 5, U.S. Code, including a position under a temporary appointment;
- (2) A member of the uniformed services as defined in section 101(3), title 37, U.S. Code;
- (3) A special Government employee as defined in section 202, title 18, U.S. Code; and,



(4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, U.S. Code appendix 2.

"Person" means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation" means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment" means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient" includes all contractors and subcontractors at any tier in connection with a Federal contract. The term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed" means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State" means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and a multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibition.

(1) Section 1352 of title 31, U.S. Code provides in part that no appropriated funds may be expended by the recipient of a Federal contract, grant, loan, or cooperative agreement to pay



any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The prohibition does not apply as follows:

(i) Agency and legislative liaison by Own Employees.

(A) The prohibition on the use of appropriated funds, in paragraph (b)(1) of this section, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a Federal contract if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(b)(2)(i)

(B) For purposes of paragraph (A) of this section, providing any information specifically requested by an agency or Congress is allowable at any time.

(b)(2)(i)

(C) For purposes of paragraph (A) of this section, the following agency and legislative liaison activities are allowable at any time only where they are not related to a specific solicitation for any covered Federal action:

1 (i) Discussing with an agency (including individual demonstrations) the qualities and characteristics of the person's products or services, conditions or terms of sale, and service capabilities; and,

2 (ii) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.

(b)(2)(i)

(D) For purposes of paragraph (A) of this section, the following agency and legislative liaison activities are allowable only where they are prior to formal solicitation of any covered Federal action:

1 (i) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

2 (ii) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and,

3 (iii) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Public Law 95-507 and other subsequent amendments.



(b)(2) (E) Only those activities expressly authorized by paragraph (i) of this section are allowable under paragraph (i). (b)(2)

(ii) Professional and technical services by Own Employees.

(A) The prohibition on the use of appropriated funds, in paragraph (1) of this section, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a Federal contract or an extension, continuation, renewal, amendment, or modification of a Federal contract if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal contract or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal contract.

(b)(2)(ii)

(B) For purposes of paragraph (A) of this section, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation, or reasonably expected to be required by law or regulation, and any other requirements in the actual award documents.



(b)(2) (D) Only those services expressly authorized by paragraph (ii) of this section are allowable under paragraph (b)(2) (ii).

(iii) Reporting for Own Employees.

No reporting is required with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(iv) Professional and technical services by Other than Own Employees.

(A) The prohibition on the use of appropriated funds, in paragraph (b)(1) of this section, does not apply in the case of any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action, if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal contract or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal contract. (b)(2)(iv)

(B) For purposes of paragraph (A) of this section, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.



(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation, or reasonably expected to be required by law or regulation, and any other requirements in the actual award documents.

(D) Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(b)(2) (E) Only those services expressly authorized by paragraph (iv) of this section are allowable under paragraph (b)(2) (iv).

(c) Disclosure.

(1) Each person who requests or receives from an agency a Federal contract shall file with that agency a certification, set forth in \_\_\_\_\_, that the person has not made, and will not make, any payment prohibited by paragraph (b) of this clause.

(2) Each person who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, Standard Form-LLL, "Disclosure of Lobbying Activities," if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under paragraph (b) of this clause if paid for with appropriated funds.

(3) Each person shall file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under paragraph (c)(2) of this section. An event that materially affects the accuracy of the information reported includes:

(i) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

(ii) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or,

(iii) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(4) Any person who requests or receives from a person referred to in paragraph (c)(1) of this section a subcontract exceeding \$100,000 at any tier under a Federal contract shall file a certification, and a disclosure form, if required, to the next tier above.



(5) All disclosure forms, but not certifications, shall be forwarded from tier to tier until received by the person referred to in paragraph (1) of this section. That person shall forward all disclosure forms to the agency.

(d) Agreement. In accepting any contract resulting from this solicitation, the person submitting the offer agrees not to make any payment prohibited by this clause.

(e) Penalties.

(1) Any person who makes an expenditure prohibited under paragraph (b) of this clause shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure.

(2) Any person who fails to file or amend the disclosure form to be filed or amended if required by this clause, shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

(3) Contractors may rely without liability on the representations made by their subcontractors in the certification and disclosure form.

(f) Cost allowability. Nothing in this clause is to be interpreted to make allowable or reasonable any costs which would be unallowable or unreasonable in accordance with Part 31 of the Federal Acquisition Regulation. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any of the provisions of Part 31 of the Federal Acquisition Regulation.

(End of Clause)

[FR Doc. 89-29732 Filed 12-19-89; 12:05 pm]

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# Reader Aids

Federal Register

Vol. 54, No. 243

Wednesday, December 20, 1989

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## CFR PARTS AFFECTED DURING DECEMBER

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**H.R. 1/Pub. L. 101-235**

Department of Housing and Urban Development Reform Act of 1989. (Dec. 15, 1989; 103 Stat. 1987; 73 pages) Price: \$2.25

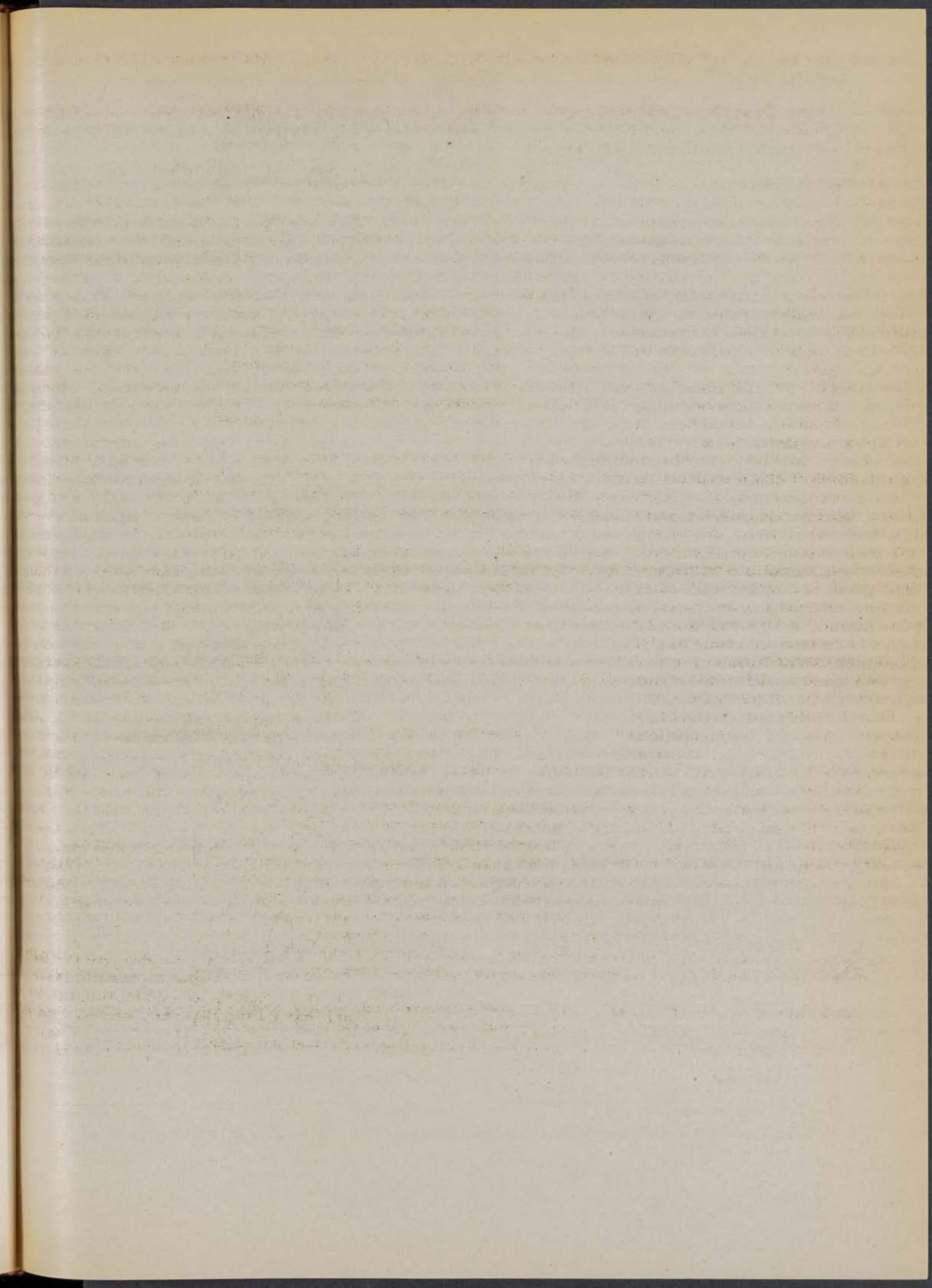
**H.R. 3671/Pub. L. 101-236**

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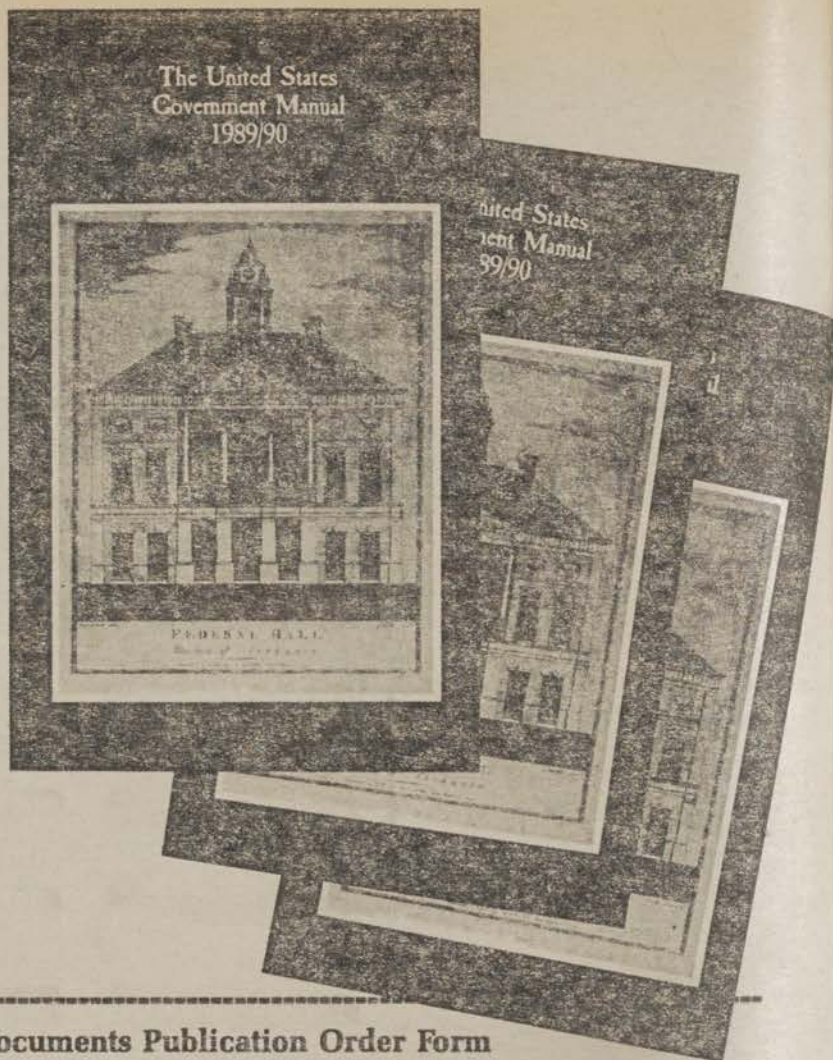
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